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**U. P. Sodic Land Reclamation Project**

**SOCIO-ECONOMIC SURVEY OF THE PROJECT AREA**

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**REPORT  
of  
A Research Team  
Under the Direction  
of**

**Professor Ajit Kumar Singh**

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**INSTITUTE OF DEVELOPMENT STUDIES**

Sector 'O' Aliganj Housing Scheme  
Lucknow 226020

U.P. SODIC LAND RECLAMATION PROJECT

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GIRI INSTITUTE OF DEVELOPMENT STUDIES  
SECTOR D, ALIGANJ HOUSING SCHEME  
LUCKNOW 226 020



## FOREWORD

It gives me great pleasure to forward the report of our findings based on the Socio-Economic Survey of the project area of U.P. Sodic Land Reclamation Project. The study presents secondary data on different socio-economic indicators of the ten districts and twenty three blocks to be covered by the project as well as findings of a field survey of 130 rural households spread over 13 villages - 2 each from 9 out of 10 districts included in the project area. Survey in Aligarh district could not be conducted due to disturbed law and order situation.

The coverage of the study is quite comprehensive and data on a large number of socio-economic variable have been collected. The detailed terms of the socio-economic survey included the the following :

1. Land holding profile of agricultural families of the project area.
2. Age profile of agricultural families of the project area.
3. Economic profile of agricultural families of the project area.
4. Education profile of agricultural families of the project area.
5. Communication and other infrastructure facilities in the project area like bank, marketing facility, roads, transport, etc.
6. Social profile, agronomic practices and their relationship.
7. Land tenurial rights and possibilities of any social stress due to implementation of usar reclamation project.

8. Extent of indebtedness and credit borrowing capacity of different categories.
9. Whether women are engaged as agricultural labour?
10. Whether allottees have experience of cultivation?
11. Whether people are engaged fully in agriculture or are partly engaged in industrial and other sectors also?
12. Whether continuous cropping is being followed?
13. What is the percentage of absentee cultivators?
14. Receptivity of cultivators to the programmes.
15. Whether cultivators are willing to sell/buy irrigation water?

Findings of the study are presented under seven chapters. Chapter I presents the profiles of the districts, blocks and surveyed villages on the basis of secondary official data. Remaining six chapters present findings of the field survey. We begin with the findings of the group discussions with village leaders, cultivators and block officials in Chapter II. Socio-economic characteristics of sample households have been presented in Chapter III. Chapter IV deals with land use, cropping pattern and irrigation on sample farms. Chapter V discusses the main features of the agricultural economy including yield levels, value productivity and cost structure on sample farms, while Chapter VI discusses the salient agronomic practices in the study area. Situation in respect of ownership of assets, level and sources of household income and extent of indebtedness has been depicted in Chapter VII.

It is hoped that the findings of the study will help the project authorities in formulating the project design as well as in its implementation. A word of caution, however, needs to be added.. Though our sample was drawn randomly taking care to see that different categories of cultivators were included in the sample, it is not fully representative of the sample area from a purely statistical angle as due to paucity of time sample proportionate to population of different land size categories could not be drawn. We find that the average size of holding in our sample comes to about 4.5 acres, whereas average holding in the area is only about 2.5 acres. Thus, the actual situation would be even more grim than what comes out of our study.

The time schedule given to us by the U.P. Government was extremely tight. However, our study team took up the challenge spiritedly and it is a matter of great satisfaction to us that a full length study could be completed in a remarkably short time of little over two months. Credit for this goes to the members of the study team who braved smilingly the inconveniences of the field visit during the chilly weather of January and worked overtime and even during holidays for a prolonged stretch of time. I am deeply thankful to all of them for their sincere and hard work and excellent team spirit. It is truly a team work in which everybody collaborated whole heartedly at different stages of the work.

The team of our temporary research assistants in the project consisting of Shri Arun Kuksal, Shri Ramesh Prasad, Shri Mohd. Kaleem, Shri S.K. Trivedi and Shri Rama Nanda Gupta, worked extremely hard and provided excellent research support in conducting the field work and processing and tabulating data.

I would also like to thank Prof. B.K. Joshi, Director, and the secretarial staff of the Giri Institute of Development Studies for providing the infrastructural facilities needed for the study. Particular mention must be made of Shri N.B. Bhatt for the excellent and speedy composition and typing of the study report on computer.

We would also like to thank U.P. Government for providing funds for the study. Special thanks are also due to Shri Sushil Kumar, IAS, Joint Secretary in Chief Secretary's Branch, Shri V.K. Singhal, Additional Director Agriculture, and Shri C.P. Shukla, Managing Director, Cooperative Agriculture and Rural Bank for their cooperation and interest in the study. Finally we would like to thank various officials at the district level who provided logistic support and arranged village trips for field survey and our respondents who willingly provided information in the hope that something useful may be done for their economic upliftment. That would also be our hope and reward.

March 2, 1991  
Lucknow

AJIT KUMAR SINGH

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## CHAPTER I

### District, Block and Village Profiles

#### I.1 Introduction

Reclamation of wastelands for meeting the needs of human and livestock population and restoring the ecological balance is high in the agenda of planners in the country. Very large tracts of alkaline and saline lands are found to occur in the state of Uttar Pradesh. U.P. Sodic Lands Reclamation Project is a major state initiative in the direction of reclaiming these sodic lands and putting them to suitable productive uses.

The project area comprises 64,145 hectare of land spread over 349 villages belonging to 22 blocks of the selected 10 districts of the state. The districts are spread over a continuous longitudinal belt along the Gangetic plains covering Western, Central and Eastern parts of the state. Many of the districts belong to the economically most backward part of the state.

The geographical features of the project area have been outlined in the main project report. In this chapter we have presented the major socio-economic characteristics and the level of infrastructural facilities in the districts, blocks and sample villages of the project area. The presentation is based upon secondary data culled from Census of India, Agricultural Statistics of U.P. and other official publications.



## 1.2 District Profiles

1.2.1 Demographic Features : Table 1.1 shows district-wise population and demographic features. According to Census 1981 the ten districts of the project area had a total population of 2.25 crores which is about 20.34 per cent of the state population. Population size at district level varied between 1 and 38 lakhs. The decadal growth of population during 1971-81 varied between 18.3 and 29.3 per cent against the state average growth of 25.5 per cent. Only Allahabad and Pratapgarh registered above average population growth. The sex ratio is generally adverse and varies between 827 and 1021. As far as urbanisation is concerned, Aligarh and Allahabad have a higher proportion of population residing in urban areas as compared to the figure of 17.95 per cent in the state. The urban population is recorded merely 3.3 per cent in district Sultanpur and 5.1 per cent in Pratapgarh. The density of population in all the selected districts is significantly higher than the state average of 377 per sq.km. The proportion of scheduled caste population is higher in eight districts than the state as a whole (21.2 per cent). There is no scheduled tribe population in eight districts.

1.2.2 Literacy Rate : Literacy rate is found higher in districts of Aligarh, Allahabad, Etawah and Mainpuri as compared to the state average of 27.2 per cent (Table 1.2). Among the districts of project area, Fatehpur had lowest literacy rate (18.9 per cent) and Etawah highest literacy rates (37.3 per cent). The female literacy rate has is in seven districts as compared to the state (14.0 per cent). There is great variation in the literacy

rates in the districts - from 28.9 per cent to 48.7 per cent in case of male literacy and 7.2 per cent to 23.6 per cent in case of female literacy (Table 1.2).

**1.2.3 Workforce and Work Participation Rate :** Table 1.3 shows the sex-wise distribution of workers in different districts and their participation rate. The ten districts of the project area constitute about 19.60 per cent workers in the total workers of the state. The percentage of workers in the population is less than the state average (29.2 per cent) in seven districts. Female work participation rate is very low and varies between 1.1 per cent and 8.9 per cent. Among the male population, by and large a similar pattern is observed in all the districts with work participation rates varying between 45.0 per cent and 52.2 per cent.

**1.2.4 Occupational Pattern of Workers :** When we analyse the distribution of workers in different occupations, it is found that in 1981, the proportion of workers classified as cultivators was higher in eight districts as compared to the state average (58.5 per cent). Similarly, the proportion of workers working as agricultural labour was also found comparatively higher in seven districts than the state average (16.0 per cent). Village and cottage industries are not well developed in the rural areas. The proportion of workers engaged in household industries and manufacturing activities was less than the state average (3.7 per cent) in all the districts of the project area except Allahabad and Azamgarh. These districts had also comparatively lesser



proportion of workers engaged in service sector in comparison to the state average except Aligarh and Allahabad districts which are more urbanised (Table I.4).

**1.2.5 Land Use Pattern :** Table I.5 presents the district-wise land distribution and land use pattern. The average size of land holdings is smaller in districts like, Allahabad, Azamgarh, Mainpuri, Pratapgarh and Sultanpur as compared to state average (0.93 hectare). Among the districts the land holding size varies from 0.53 hectare in district Pratapgarh to 1.42 hectare in district Aligarh. The per capita net area sown is only 0.49 hectare in the state. It is generally found comparatively lower in the project districts as compared to the state average.

The percentage of small and marginal holdings to the total holdings is as high as 88.02 in Uttar Pradesh. Six districts, (Allahabad, Azamgarh, Mainpuri, Pratapgarh, Rae Bareilly and Sultanpur) have higher percentage of land holdings which are small and marginal as compared to the state (Table I.5). Similarly, the percentage of area under small and marginal holdings is also recorded higher in eight of the project districts than the state average.

The percentage of net area sown to the total reporting area is 57.77 in Uttar Pradesh. However, in all the districts, the proportion of net area sown to total reporting area is recorded substantially higher than the state average varying from 59.2 per cent to 77.9 per cent (Table I.5). The proportion of area under usar and culturable land to the total reporting area is

substantially higher in the districts in general as compared to the state average. As a proportion of reported area land under barren and unculturable category ranges between 2.4 per cent to 3.21 per cent. Total area under this category in the project area is 2.22 lakh hectares.

The cropping intensity is registered at 146.0 in Uttar Pradesh. However, in eight districts the intensity of cropping is recorded higher than the state average. It ranges between 135 and 165.

Agriculture in the study area is subsistence oriented with nearly 90 per cent area under foodgrain crops. The proportion of area under commercial crops varies between 5.5 per cent and 14.5 per cent (Table I.5).

**I.2.6 Levels of Agricultural Development** : Table I.6 shows select indicators of agricultural development in the project area. Per hectare productivity of wheat crop is lower than the state average of 20 quintals in six districts. But in the case of paddy, the per hectare production is found higher in seven districts as compared to the state average (Table I.6). In the case of sugarcane per hectare yield rate is lower in all the 10 districts than the state average.

Gross value of agricultural produce per hectare of net area sown is recorded higher in most of the project districts as compared to the state (Table I.6). However, per capita gross value of agricultural produce was lower than the state in eight districts. The level of mechanisation in agriculture is recorded



far behind the level of mechanisation in the state in all the districts. Per tractor gross cropped area was 173 hectares, while in the districts this figure varies from 165 hectares in district Aligarh to 474 hectares in district Sultanpur (Table I.6). By and large per hectare fertiliser consumption was recorded at the same level as in the state. On an average there are 2 pumpsets/tubewells per 1000 hectares of net area sown. Total number of energised private pumpsets/tubewells was 1,18,345 in the ten project districts constituting 23.13 per cent of the total energised private pumpsets/tubewells of the state.

**I.2.7 Irrigation Facilities** : Table I.7 shows the extent of irrigated area in the districts of project area. The percentage of net irrigated area was recorded as low as 50.1 in district Sultanpur and as high as 94.9 in district Aligarh. Irrigation level is recorded higher in seven districts as compared to the state average (Table I.7).

Private tubewells/pumpsets are the major sources of irrigation in project area as well as in the state (Table I.7). The second major source is canal. In district Rae Bareilly, 67.13 per cent of the total irrigated area is irrigated by canals, whereas this figure is 21.53 for district Aligarh and 31.35 per cent for state as a whole. The percentage of net irrigated area through private tubewells varies from 25.59 in district Rae Bareilly to 72.11 in district Aligarh. A relatively small proportion of irrigated area is irrigated through the source of Government tubewells in all the districts.

I.2.3 Agricultural Infrastructure : Availability of agricultural infrastructure in the project area is shown in Table I.3. There is one bank branch of banks per 14,000 population in the state. By and large a similar pattern is also observed in all the districts as far as branches of banks are concerned. District Etah has lowest number of credit societies where there are 105 credit societies per lakh of population. The corresponding figure is 273 in district Allahabad. There are 9 branches of Land Development Banks in district Allahabad where as this figure is 3 for Fatehpur and Mainpuri. The credit deposit ratio is recorded 47 in the state and it varies from 29 in district Pratapgarh to 61 in district Sultanpur. The total number of Cooperative Marketing Societies was 258 in the state in 1939. In the case of districts this figure varied from 2 in Sultanpur to 7 in district Etawah. The number of cold storage per 1000 sq.kms. of area is rather low varying between 1 and 6.

The number of livestock per 100 hectares of reporting area is 216 in the state, whereas the number of livestock is substantially higher in all districts of the project area (Table I.3). In U.P. there is one veterinary hospital per 40,000 livestock population. The number of livestock per stockman centre was 24,000 in U.P. The project area is lagging behind the state average in these facilities. The number of male cattle population was as low as 717 per one thousand ploughs in district Etawah and as high as 1603 in district Sultanpur.



**1.2.9 Level of Economic Infrastructure** : Indicators of economic infrastructure have been shown in Table I.9. The length of pucca road varies between 23 and 47 km. per sq.km. of area against 30 km. in U.P. as a whole. Similarly, the length of pucca road per one lakh of population varies from 73 to 100 km. against state average of 88 km. Upto 1989, about 70 per cent of the total villages were electrified in Uttar Pradesh. As far as electrification is concerned these districts are far better than the state average. In district Rae Bareilly all the villages have been electrified. However in other districts this figure varies from 59 in district Etawah to 93 in district Aligarh (Table I.9). The length of railway line per 1000 sq.kms. of area was recorded 30 kms in the state. However, six districts of the project area had length of railway line per sq. km. of area.

**1.2.10 Social Infrastructure** : Table I.10 presents the level of educational and health facilities in the districts. During 1983-89, there were 67 junior basic schools per lakh of population in the state. The project districts had a more or less similar pattern as that of the state. In educational facilities, district Azamgarh has remained relatively poor. On the whole, a similar pattern is found in the district as well as in the state as far as the facility of senior basic school level education is concerned. The degree level educational institutions are seen unevenly distributed among the districts. There are, by and large, four allopathic hospitals per one lakh population in each district. But in the case of beds in hospitals, a great variation is observed in the different districts. District Etawah has merely



25 beds per one lakh of population in the allopathic hospitals, while this figure was 91 in district Allahabad.

To sum up, the study of district profiles indicates the general backwardness of the project area. The economy is predominantly agricultural with a very heavy population pressure. At the same time agricultural productivity and income levels are quite low. In terms of economic and social infrastructural facilities the level of development in the districts included in the project area is more or less at the same level as in the state as a whole, though some inter-district variations do exist.

### I.3 Block Profiles

The project will be implemented in 23 selected block in 10 districts. Tables I.11 to I.17 present data on selected socio-economic indicators for the blocks covered in the project.

I.3.1 Population and Demographic Features : Table I.11 gives data on population size and other demographic features of the blocks. Average population per block is around 100,000, though the size varies from 53,000 to 130,000. The sex ratio is generally adverse and ranges between 821 and 1111. Population pressure is quite high though density of population varies from 232 to 640 per sq. km. The blocks falling in eastern region have a higher density as compared to those in the western and central parts. The proportion of economically and socially backward castes ranges from 15.4 per cent to as much as 38.6 per cent. Growth rate of population also shows wide variations - from 7.9 per cent to 36.5 per cent during the decade 1971-81.

**1.3.2 Literacy Rates** : As shown in Table I.12 literacy rates are very low though significant variation are found among blocks. Thus literacy rate varies from 19.3 per cent to 35.2 per cent. Male literacy rates are somewhat higher falling between 23.3 per cent and 46.0 per cent. However, in case of females the literacy rates are shockingly low being less than 10 per cent in as many as 13 blocks and between 10.0 and 15.0 per cent in 7 blocks.

**1.3.3 Work Force and Occupational Structure** : Work participation rates in the blocks are rather low as only less than one-third of population is economically active (Table I.13). The participation rates were particularly low in the more densely populated region of eastern U.P., i.e., in blocks falling in districts Azamgarh, Pratapgarh and Sultanpur.

As Table I.13 reveals the economy of the selected blocks is predominantly agricultural with 30 to 95 per cent of workers engaged in agriculture. The proportion of cultivators is quite high, though it differs widely from 49.2 per cent to 30.3 per cent of work force. Quite a sizeable proportion of workers belong to the category of landless agricultural labourers - the proportion again varying from around 10 per cent to 34 per cent. There is a general dearth of non-agricultural economic activity in the project area. A very small proportion around 2-3 per cent only is engaged in household industry except in the two blocks of Allahabad district. Other non-agricultural activities, mainly



services, provide employment to 5 to 16 per cent of total workers (Table I.13).

**I.3.4 Agricultural Development** : Table I.14 shows select indicators of agricultural development. Through by and large the level of agricultural development is not high in the area, significant inter block differentials are found to exist. Thus the gross value of agricultural produce per hectare of gross cropped area varies from Rs.3400 to Rs.5300. Similarly per hectare consumption of chemical fertilisers varies from 30 kg. to 116 kg. Again cropping intensity varies from 129 to 130. The degree of commercialisation is generally low and in the majority of blocks 90 per cent or above of the gross cropped area is under-foodgrain crops.

**I.3.5 Irrigation Facilities** : The potential of both surface and ground water in the project area is quite large. The extent of irrigation facilities is, however, not uniformly developed. As shown in Table.15 the proportion of net irrigated area to net sown area ranges from around 50 per cent to over 90 per cent in some blocks. Blocks of districts Sultanpur and Fatehpur had relatively lower level of irrigation facilities. Canals, tubewells and pumpsets are the main sources of irrigation accounting for, by and large, over 95 per cent of irrigated area. Only in Airaya block of Fatehpur district we find a sizeable area being irrigated by traditional wells and ponds.

**I.3.6 Agricultural Infrastructure** : Table I.16 indicates the access of the villagers to various types of infrastructural facilities needed for agricultural activities. Again one finds a significant inter-block variation in the location of agricultural infrastructure facilities. The availability of facilities like seed stores, primary agricultural credit societies and veterinary hospitals is relatively better as compared to facilities like marketing and cold storage. The agricultural infrastructure needs to be further strengthened in the project area, particularly in the blocks lagging behind.

**I.3.7 Socio-Economic Infrastructure** : In respect of socio-economic infrastructure again we find marked inter-block disparities (Table I.17). While roads and schooling facilities have expanded widely, the same is not true for health facilities, which are very inadequate in the rural areas. The spread of commercial banking is also quite uneven. Again, we find that in over half of the blocks over 90 per cent of the villages have been electrified while in several blocks the proportion of electrified villages is less than 30 per cent. These disparities in infrastructural facilities need to be rectified at the earliest.

#### **I.4 Village Profiles**

An indepth socio-economic survey of 13 villages in the project area was conducted by the research team of the Gird Institute of Development Studies in the month of January 1991.



For the field survey the team visited 17 blocks covered under the project area spread over 3 out of 10 project districts. Survey of Aligarh district could not be conducted due to disturbed law and order problem of the district. From each block one village was selected (2 in case of Etah district) for socio-economic survey purposively in consultation with block level officials keeping in mind the problem of sodic land. Out of the 13 sample villages 4 were located within 5 km., 5 between 5 and 10 km. and 3 between 10 and 20 km. of the block headquarter. Table 1.8 shows the general locational features of the sample villages. By and large the access of the villagers to means of transport and communication can be termed fairly good.

As indicated in Table 1.19 the population of sample villages varied between 272 and 3359 and the household population between 53 and 672. The average population per village comes to about 13.00 and number of households per village to around 340. Per household population in the sample villages is 5.3.

Average size of holding in the sample villages is only 0.30 hectare. Nearly 65 per cent of the holdings are below 1.0 hectare and another 27 per cent between 1.0 and 2.0 hectares. Thus 92 per cent of the holdings belong to marginal and small category and these account for 69 per cent of holding area (Table 1.20).

Table 1.21 shows the land use pattern in the villages. Only 47.7 per cent of total area is under cropping. Area under current and other fallows is fairly large - about 27.5 per cent. Another

13 per cent area is under the category of culturable waste. Area under forests as well as pastures and grazing land is extremely low.

Cropping pattern in the sample villages is basically subsistence oriented with 92.4 per cent of area under foodgrains, paddy and wheat alone accounting of around 80 per cent of gross cropped area (Table I.22).

There is a long tradition of irrigated agriculture in the study area. Canals are the major source of irrigation followed by private tubewells (Table I.23). About 5 per cent of irrigated area is irrigated from government tubewells. Nearly 70 per cent of net sown area is under irrigation. While wheat cultivation is basically under irrigated cultivation, in case of paddy irrigated area is only about half (Table I.24). These two crops account for 52 and 31 per cent of total irrigated area respectively.

Livestock density in the area is quite high with 323 livestock per 100 hectare of net sown area (Table I.25). While bullocks are the major source of draft power, about 25 per cent of livestock consists of milch animals. Animal husbandry is practiced widely as an allied agricultural activity. Sheep and goats are also found in sizeable number. Quality of the livestock is, however, quite poor and yield levels extremely low. Problems of fodder and grazing land are also quite acute.



Table 1.1District-wise Population and Demographic Features

Districts	Population ('000)			Sex Ratio	% of Urban Population	Density of Population Per Sq. Km.	% of Scheduled Caste Population	Decadal Population Growth Rate 1971-81
	Total	Male	Female					
Aligarh	2575	1339	1176	341	23.00	513	22.50	+21.93
Allahabad	3797	2009	1738	390	20.37	523	24.52	+29.27
Azamgarh	3544	1754	1790	1021	9.20	617	24.92	+24.03
Etawah	1743	952	791	331	14.79	403	25.41	+20.37
Etah	1859	1017	842	327	15.49	413	17.03	18.32
Fatehpur	1572	329	743	395	8.99	379	23.73	+23.01
Mainpuri	1726	944	782	323	11.03	397	18.39	+19.42
Pratapgarh	1301	393	903	1005	5.05	435	21.55	+26.59
Rae Bareilly	1837	972	915	941	7.37	409	29.55	+24.90
Sultanpur	2043	1037	1006	971	3.30	461	23.12	+24.34
U.P.	110362	53819	52043	385	17.95	377	21.16	+25.49

Source : Census of India, 1931.

Table 1.2District-wise Literacy Rates

Districts	Total	Male	Female
Aligarh	31.35	44.04	16.24
Allahabad	27.99	41.52	12.92
Azamgarh	25.10	33.27	12.20
Etawah	37.29	43.69	23.58
Etah	27.10	33.69	13.10
Fatehpur	18.87	23.83	7.20
Mainpuri	33.30	45.56	13.49
Pratapgarh	23.31	33.91	9.30
Rae Bareli	23.03	34.94	10.47
Sultanpur	22.44	35.14	9.37
U.P.	27.16	33.75	14.04

Source : Census of India, 1981.



Table I.3

District-wise Number of Workers and Work Participation Rates

Districts	Workers ('000)			Participation Rate (%)		
	Total	Male	Female	Total	Male	Female
Aligarh	684	668	16	26.6	47.7	1.4
Allahabad	1125	966	159	29.6	49.1	3.9
Azamgarh	941	790	151	26.5	45.0	3.4
Etawah	457	448	9	26.2	47.1	1.1
Etah	524	517	7	28.2	50.9	0.3
Fatehpur	476	419	57	30.3	50.5	7.7
Mainpuri	469	463	5	27.1	49.0	0.6
Pratapgarh	496	417	79	27.5	46.4	3.7
Rae Bareli	595	507	78	31.0	52.2	3.5
Sultanpur	590	511	79	23.9	49.3	7.8
U.P.	32397	29530	2307	29.2	50.3	5.4

Source : Census of India, 1931.

Table 1.4

District-wise Distribution of Workers

(Per cent)

Districts	Cultiva- tion	Agricul- tural Labourers	Households Industry	Others	Total
Aligarh	43.1	18.9	3.5	29.5	100.0
Allahabad	46.2	22.9	5.5	25.4	100.0
Azamgarh	61.1	17.5	3.0	13.4	100.0
Etawah	65.8	12.9	2.6	13.7	100.0
Etah	69.3	12.2	2.3	15.7	100.0
Fatehpur	61.3	22.5	2.4	13.3	100.0
Mainpuri	70.7	10.7	1.6	17.0	100.0
Pratapgarh	66.9	19.6	2.9	10.6	100.0
Rae Bareli	67.4	17.4	2.0	13.2	100.0
Sultanpur	63.3	23.0	2.3	10.4	100.0
U.P.	53.5	15.0	3.7	21.9	100.0

Source : Census of India, 1931.

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Table I.5

District-wise Land Distribution and Land Use Pattern

Districts	Average Size of holdings in ha.	Percentage of Small Marginal Holdings to Total Holdings	Percentage of Small and Marginal Holdings	Percentage of Net Sown Total Reporting Area	Percentage of Net Sown in ha.	Area under Unculturable Land '000 ha.	Percentage of Usar & Unculturable Land to Total Reporting Area	Percentage of Usar of Commercial Crops to Gross Cropped Area	Intensity of Cropping
Aligarh	1.42	77.00	33.03	77.37	0.19	31.13	6.20	14.15	164
Allahabad	0.32	90.32	53.90	65.08	0.15	35.04	4.77	3.09	142
Azangarh	0.59	94.05	66.31	74.53	0.13	13.94	2.43	9.45	153
Etawah	1.01	86.36	53.59	66.49	0.19	25.24	5.73	11.76	149
Etah	1.03	97.14	53.93	67.23	0.19	11.55	2.60	13.24	165
Fatehpur	1.02	86.20	47.05	71.14	0.20	13.33	3.29	7.32	135
Mainpuri	0.99	89.34	60.35	66.25	0.13	35.55	3.21	14.43	156
Pratapgarh	0.53	95.66	74.50	62.00	0.13	12.31	3.39	7.02	143
Rae Bareli	0.76	92.39	67.37	59.13	0.15	25.44	5.54	5.45	150
Sultanpur	0.59	91.36	71.46	66.32	0.14	17.96	4.09	10.08	143
U.P.	0.93	83.02	51.61	57.77	0.19	1035.51	3.64	14.30	146

Source : State Planning Institute, U.P., District-wise Indicators of Development, 1939.



Table I.6Indicators of Agricultural Development

Districts	Per Hectare Yield (1985-86) (Quintals)			Gross Value of Agricultural Produce per ha. Net Sown Area at Current Prices (in Rs.) (1984-85)	Gross Value of Agricultural Produce per Capita (Rural) at Current Prices (in Rs.) (1984-85)
	Wheat	Paddy	Sugarcane		
Aligarh	26.83	15.97	463.24	6012	1103
Allahabad	16.58	15.07	416.35	5966	863
Azamgarh	18.30	13.15	390.00	6622	913
Etawah	23.13	14.97	416.35	5186	944
Etah	22.31	11.95	452.60	6169	1093
Fatehpur	18.23	14.56	416.35	5179	1011
Mainpuri	23.52	15.23	435.20	5758	1005
Pratapgarh	17.79	15.92	310.63	6131	749
Rae Bareilly	17.19	15.31	451.34	5607	790
Sultanpur	19.65	18.30	341.52	6273	864
U.P.	20.00	14.33	490.19	6003	1053

Contd..

Table I.5 (Contd.)

Districts	Per Tractor Gross Cropped Area (in ha.) (1933-34)	Per Hectare Consumption of Fertilisers (in Kg.) (1984-85)	Number of Energised Pri- vate Pumpsets/ Tubewells upto 31.3.1936	Pumpsets/ Tubewells Per 100 ha. of NS
Aligarh	165	56	21032	4
Allahabad	235	66	13121	2
Azamgarh	228	51	29602	5
Btawah	402	75	4040	1
Btah	432	51	9034	2
Fatehpur	404	50	3055	2
Mainpuri	357	53	9367	2
Pratapgarh	331	70	5995	2
Rae Bareli	353	70	9438	2
Sultanpur	474	62	8111	2
J.P.	178	66	511801	2

Source : (i) Uttar Pradesh Ki Krishi Ankra (1935-36),  
Directorate of Agriculture, Lucknow.

(ii) State Planning Institute, U.P., District-  
wise Indicators of Development, (1936).

Table 1.7District-wise Sources of Irrigation

Per cent of Net Irrigated Area Irrigated By					Percentage Net Irrig: Area to N Area Sown
Canals	State Tubewells	Private Tubewells	Other Sources	Total	
21.53	5.16	72.11	1.15	100.00	94.91
16.75	12.33	36.03	4.89	100.00	50.79
23.21	3.89	70.05	2.85	100.00	71.00
64.96	3.75	26.37	4.42	100.00	59.30
24.67	5.40	57.40	12.53	100.00	30.50
53.31	4.00	32.50	10.19	100.00	47.02
29.92	5.65	62.02	2.51	100.00	33.63
59.20	1.19	35.57	4.04	100.00	62.34
57.13	3.61	25.59	3.67	100.00	66.96
44.05	3.43	42.51	4.96	100.00	50.11
31.35	6.31	52.51	9.33	100.00	57.19

State planning Institute, U.P., District-wise Indicators of Development, 1939.



Table 1.3

District-wise Indicators of Agricultural Infrastructure

District	Population per Bank (in '000) (1989)	No. of Primary Agricul- tural Credit Societies (1936-87)	Land Develop- ment Bank (No.) (1989)	Credit Deposit Ratio (1989)	Cooperat- tive Mar- keting Societies (No.) (1989)	No. of Cold Sto- rage Per 1000 Sq. Km. of Area (1987-89)
Aligarh	12	187	7	44	7	2
Allahabad	15	273	9	34	6	4
Azamgarh	17	272	7	32	5	2
Etawah	17	136	4	33	7	5
Etah	16	105	5	50	5	3
Fatehpur	16	112	3	46	4	1
Mainpur	15	110	3	49	4	5
Pratapgarh	16	174	5	29	3	1
Rae Bareli	16	190	7	56	4	2
Sultanpur	15	183	5	61	2	1
U.P.	14	8597	274	47	253	3

Contd.../

Table I.8 (Contd.)

Districts	No. of Agri-cultural Marketing Centres (1939)	No. of Live-stock per 100 ha. of Reporting Area (1939)	No. of Livestock Per Veterinarian Hospital (in '000) (1933-39)	No. of Live-stock Per Stockman Centre (in '000) (1933-39)	Male Cattle Per '000 of Plough (1938)
Aligarh	7	291	42	12	1343
Allahabad	5	287	40	34	1533
Azamgarh	3	339	35	32	1000
Etawah	6	270	54	29	717
Etah	5	259	67	27	1155
Fatehpur	5	299	43	41	938
Mainpuri	6	219	50	27	932
Pratapgarh	1	338	42	42	1543
Rae Bareli	5	362	49	47	1432
Sultanpur	2	334	37	28	1603
U.P.	292	216	40	24	1151

Source : State Planning Institute, U.P., District-wise Indicators of Development, 1939.

Table I.9District-wise Indicators of Economic Infrastructure

Districts	Length of Pucca Road Per 100 Sq. Km. of Area (in Kms.) (1.4.1933)	Length of Pucca Road Per 1 Lakh of Population (in Km.) (1.4.1933)	Length of Rail-way Line Per 1000 Sq. Km. of Area (1937-38)	Percentage of Electrified Villages to Total Inhabited Villages (1939)
Aligarh	47	91	33	98
Allahabad	37	71	42	82
Azamgarh	44	72	23	87
Etawah	36	39	21	59
Etah	42	100	33	69
Fatehpur	28	73	21	76
Mainpuri	35	87	23	80
Pratapgarh	37	77	38	67
Rae Bareilly	39	96	33	100
Sultanpur	38	83	42	93
U.P.	30	88	30	70

Source : State Planning Institute, U.P., District-wise Indicators of Development, 1939.



Table I.10

District-wise Indicators of Social Infrastructure

Districts	No. of Schools Per Lakh of Population, 1988-89				No. of Allopathic Hospital/ Dispensary Per Lakh of Population	No. of Beds in Allopa- thic Hospi- tal/Dispen- sary Per Lakh of Po- pulation
	Junior Basic School	Senior Basic School	Higher Secondary School	Degree College		
Aligarh	56	15	6	0.2	4	87
Allahabad	50	15	6	1.0	4	91
Azamgarh	49	13	4	0.4	4	30
Etawah	74	21	7	0.4	3	31
Etah	53	18	5	0.3	4	25
Fatehpur	66	17	5	0.1	4	32
Mainpuri	81	21	6	0.3	4	32
Pratapgarh	64	14	5	0.4	4	49
Rae Bareli	61	15	4	0.3	4	48
Sultanpur	77	15	5	0.4	4	41
U.P.	67	15	5	0.4	-	-

Source : State Planning Institute, U.P., District-wise Indicators of Development, 1989

Table I.IIBlock-wise Population and Demographic Features

District/ Blocks	<u>Population '000</u>			Sex Ratio	Density of Popu- lation Per Sq. Km.	Percen- tage of Scheduled Caste Po- lation	Decadal Popula- tion Growth (in %) (1971-81)
	Total	Male	Female				
0	1	2	3	4	5	6	7
<b>Aligarh</b>							
Akrabad	100	55	45	326	360	13.1	13.0
Sindara Rao	96	52	44	933	373	21.9	15.3
<b>Allahabad</b>							
Handiya	101	53	49	929	603	20.9	27.5
Dhanupur	114	59	55	929	640	17.9	36.5
<b>Azamgarh</b>							
Thakma	112	54	53	1090	491	39.6	23.4
Lalganj	130	62	69	1111	535	31.9	20.3
<b>Etah</b>							
Sakit	113	62	51	921	300	15.4	12.1
<b>Etawah</b>							
Achhda	99	55	45	316	353	23.2	7.9
Bidhuna	102	56	46	929	323	23.4	10.5
<b>Fatehpur</b>							
Airaya	103	56	52	931	335	25.2	17.2
Asothar	109	58	50	970	275	17.6	20.5
Bahuwa	101	54	47	975	363	27.6	15.2

Contd.../-



Table I.11 (Contd.)

0	1	2	3	4	5	6	7
<b>Mainpuri</b>							
Sultanganj	123	67	56	835	402	17.3	19.5
Karhal	102	55	46	319	282	19.2	16.3
<b>Pratapgarh</b>							
Patti	96	42	44	1045	423	19.4	20.5
Ashpur Deosara	104	51	53	1027	434	20.5	26.1
Rampurkhas	133	69	69	1000	323	27.3	23.4
<b>Rae Bareli</b>							
Harchandpur	30	12	38	911	324	33.2	18.1
Rahi	110	53	52	910	446	23.2	17.4
Amavan	73	33	35	914	369	30.3	24.9
Bahadurpur	53	23	25	900	326	32.5	7.6
<b>Sultanpur</b>							
Bhaddniyya	96	49	43	933	443	23.2	27.3
Lambhura	99	50	49	996	453	24.3	23.5

Source : District-wise Statistical Bulletins, 1939,  
Economics and Statistics Division, State  
Planning Institute, U.P.



Table 1.12

Block-wise Literacy Rate (Per Cent), 1981

District	Blocks	Total	Male	Female
Aligarh	Akrabad	27.5	40.5	11.7
	Sindara Rao	23.5	42.4	11.8
Allahabad	Handiya	22.0	37.0	4.0
	Dhanupur	21.0	36.0	4.0
Azamgarh	Thekna	22.4	35.7	10.2
	Lalganj	24.4	32.7	11.5
Etah	Sakit	25.1	37.1	10.5
Etawah	Achhalda	32.6	44.9	17.6
	Bidhuna	36.2	47.6	22.5
Fatehpur	Airaya	19.3	31.5	6.3
	Asothar	24.2	36.6	9.3
	Bahuwa	25.4	33.7	10.5
Mainpuri	Sultanganj	33.0	46.0	17.0
	Karhal	29.0	41.0	15.0
Pratapgarh	Patti	23.5	41.0	7.0
	Ashpur Deosara	23.3	39.9	7.2
	Rampur Khas	17.0	23.7	5.2
Rae Bareli	Harchandpur	22.2	36.6	6.5
	Rahi	19.4	30.2	5.5
	Amavan	20.3	32.3	7.1
	Bahadurpur	17.5	25.5	8.5
Sultanpur	Bhaddniyya	21.6	34.8	3.4
	Lambhuva	23.6	37.3	9.7

Source : District-wise Statistical Bulletins, 1982,  
Economics and Statistics Division, State  
Planning Institute, U.P.

Table 1.13

Block-wise Distribution of Workers

District/ Blocks	Total Workers as per cent of Total Popula- tion	Per cent of Workers By Occupation			
		Cultiva- tors	Agricul- tural Workers	Workers Engaged in Household Industry	Others
0	1	2	3	4	5
<b>Aligarh</b>					
Akrabad	27.2	62.9	22.4	3.6	11.0
Sindara Rao	27.9	65.4	20.6	2.9	11.1
<b>Allahabad</b>					
Handiya	27.5	49.2	15.0	19.6	16.2
Dhanupur	27.5	54.7	14.1	19.3	12.5
<b>Azamgarh</b>					
Thekma	22.9	62.4	21.3	1.7	7.6
Lalganj	22.1	70.7	18.1	1.3	9.5
<b>Etah</b>					
Sakit	27.7	30.1	11.4	1.4	7.1
<b>Etawah</b>					
Achhlda	26.5	73.0	14.5	0.3	6.7
Bidhuna	27.3	30.9	8.1	1.3	9.3
<b>Fatehpur</b>					
Airaya	31.1	66.3	20.1	2.6	11.1
Asothar	31.1	65.3	21.7	2.0	11.0
Bahuwa	30.4	54.4	34.1	1.3	9.2

Contd. ...

Table I.13 (Contd.)

0	1	2	3	4	5
<b>Mainpuri</b>					
Sultanganj	27.1	79.1	10.9	1.1	8.9
Karhal	28.5	85.4	8.9	0.5	5.3
<b>Pratapgarh</b>					
Patti	25.7	72.2	19.5	1.7	6.6
Ashpur Deosara	25.0	77.1	14.6	0.9	7.4
Rampurkhas	32.5	72.6	20.3	2.0	5.1
<b>Rae Bareli</b>					
Harchandpur	32.4	66.6	20.6	1.8	11.1
Rahi	32.4	69.1	17.0	2.0	11.9
Amavan	31.4	74.8	15.0	2.0	9.3
Bahadurpur	35.4	75.3	18.2	1.1	4.9
<b>Sultanpur</b>					
Bhaddniyya	25.5	57.7	26.0	3.9	12.5
Lambhuva	26.6	65.3	25.3	1.5	7.9

Source : District-wise Statistical Bulletins, 1999,  
Economics and Statistics Division, State  
Planning Institute, U.P.



Table 1.14Block-wise Indicators of Agricultural Development

District/ Blocks	Percentage of Area under Foodgrains to Gross Cropped Area	Fertilizer Consum- ption per Ha. of Gross Cropped Area (Kg.)	Value of Agriculture Produce per Ha. of Gross Crop- ped Area (Rs.)	Per Capita Foodgrains Production (Kg.)	Cropping Intensity
<b>Aligarh</b>					
Akrabad	85.2	29.5	3385	413	175.8
Sindara Rao	77.9	57.0	3396	417	130.8
<b>Allahabad</b>					
Handiya	96.0	116.3	4248	195	139.1
Dhanupur	99.5	30.6	4900	213	151.3
<b>Azamgarh</b>					
Thakma	92.4	52.3	5262	364	179.2
Lalganj	92.9	62.3	5155	240	169.1
<b>Etah</b>					
Sakit	87.6	70.0	3954	334	128.5
<b>Etawah</b>					
Achhlda	83.3	60.4	4643	386	141.5
Bidhuna	86.6	57.2	4988	400	143.5
<b>Fatehpur</b>					
Airaya	97.2	81.8	3733	331	140.9
Asothar	98.2	46.0	2755	402	123.9
Bahuwa	93.4	64.5	3452	375	151.2

Contd...

Table I.12 (Contd.)

0	1	2	3	4	5
<b>Mainpuri</b>					
Sultanganj	80.0	46.9	4993	349	150.8
Karhal	90.6	49.3	4931	545	154.1
<b>Pratapgarh</b>					
Patti	90.9	46.4	4071	322	147.7
Ashpur Deosara	91.2	52.6	1222	379	160.4
Rampurkhas	95.1	99.2	3310	312	154.8
<b>Rae Bareli</b>					
Harchandpur	92.1	32.7	4005	326	169.4
Rahi	93.3	77.9	3385	272	159.7
Amavan	95.2	56.8	3953	336	129.0
Bahadurpur	97.6	33.0	4006	364	125.6
<b>Sultanpur</b>					
Bhaddniyya	86.1	36.5	4326	239	147.3
Lambhuva	87.4	37.8	4414	240	147.7

Source : District-wise Statistical Bulletins, 1999,  
Economics and Statistics Division, State  
Planning Institute, U.P.

Table 1.15

Block-wise Percentage of Net Irrigated  
Area by Different Sources

District/ Blocks	Canals	Tubewells	Others	Total	Percentage of Net Irri- gated Area to Net Area Sown
0	1	2	3	4	5
<b>Aligarh</b>					
Akrabad	40.8	58.5	0.7	100.0	92.9
Sindara Rao	40.4	59.5	0.1	100.0	95.6
<b>Allahabad</b>					
Handiya	20.7	75.9	3.5	100.0	59.3
Dhanupur	13.7	36.2	3.9	100.0	30.3
<b>Azamgarh</b>					
Thakna	25.0	73.8	1.2	100.0	83.2
Lalganj	17.5	32.1	0.4	100.0	31.9
<b>Etah</b>					
Sakit	22.9	62.1	3.1	100.0	33.5
<b>Etawah</b>					
Achhida	55.4	40.4	4.3	100.0	73.7
Bidhuna	62.5	32.6	4.9	100.0	33.5
<b>Fatehpur</b>					
Airaya	37.7	25.3	37.1	100.0	51.4
Asothar	33.6	10.9	0.5	100.0	29.3
Bahuna	75.3	21.7	1.4	100.0	57.2

Contd..../-



Table I.15 (Contd.)

0	1	2	3	4	5
<b>Mainpuri</b>					
Sultanganj	31.2	55.3	2.0	100.0	33.0
Karhal	54.6	33.4	2.0	100.0	30.3
<b>Pratapgarh</b>					
Patti	32.3	54.7	2.5	100.0	54.3
Ashpur Deosara	34.1	52.9	2.9	100.0	74.1
Rampurkhas	33.1	15.7	1.2	100.0	70.8
<b>Rae Bareilly</b>					
Harchandpur	53.3	39.5	2.3	100.0	33.7
Rahi	50.7	37.4	1.9	100.0	59.7
Amavan	59.1	29.6	2.3	100.0	56.5
Bahadurpur	54.5	40.4	5.1	100.0	61.4
<b>Sultanpur</b>					
Bhadniyya	31.3	57.0	1.3	100.0	54.7
Lambhuva	43.3	55.4	1.3	100.0	58.9

Source : District-wise Statistical Bulletins, 1939,  
Economics and Statistics Division, State  
Planning Institute, U.P.

Table I.16

Block-wise Availability of Agricultural Infrastructure

District/ Blocks	Per cent of Villages Having the Facility Within 3 Km. of Distance						
	Market	Mandi	Cold Sto- rage	Seed Sto- rage	Veteri- nary Hospitals	Primary Agricultu- ral Credit Society	Cooperati- ve Marketing Society
0	1	2	3	4	5	6	7
<b>Aligarh</b>							
Akrabad	32.9	3.2	-	40.0	18.8	47.1	3.5
Sindara Rao	50.3	13.9	6.2	38.5	27.7	50.8	6.2
<b>Allahabad</b>							
Handiya	62.4	-	11.2	63.2	46.4	30.8	-
Dhanupur	37.4	0.5	2.1	15.8	9.5	41.1	16.3
<b>Azamgarh</b>							
Thakma	30.6	4.2	-	56.9	16.7	24.3	-
Lalganj	28.4	-	-	45.4	29.3	66.5	-
Etah							
Sakit	10.3	-	-	25.5	19.4	33.2	-
<b>Etawah</b>							
Achhida	55.7	10.4	-	38.7	39.6	73.6	9.4
Bidhuna	34.6	-	-	16.4	15.4	34.6	1.9
<b>Fatehpur</b>							
Airaya	27.3	7.4	-	43.5	21.2	45.4	7.4
Asothar	17.9	-	-	37.5	23.2	39.3	-
Bahuwa	27.6	-	-	31.0	20.7	36.8	-

Contd.../

Table I.16 (Contd.)

0	1	2	3	4	5	6	7
<b>Mainpuri</b>							
Sultanganj	35.7	-	6.1	34.7	16.3	24.5	-
Karhal	14.6	7.3	-	29.1	17.5	35.9	-
<b>Pratapgarh</b>							
Patti	40.9	12.6	15.7	61.0	34.0	62.9	-
Ashpur Deosara	52.2	5.6	-	68.3	32.6	38.2	20.3
Rampurkhas	44.3	7.3	-	62.0	41.7	69.3	-
<b>Rae Bareilly</b>							
Harchandpur	57.7	9.0	3.3	62.8	41.0	62.2	6.4
Rahi	45.1	1.0	-	51.0	40.2	55.9	2.0
Amavan	78.0	-	-	41.5	50.0	72.0	1.0
Bahadurpur	56.1	12.2	9.3	70.7	45.3	59.5	26.9
<b>Sultanpur</b>							
Bhadniyya	14.1	0.6	0.6	37.4	30.1	51.5	12.3
Lambhuva	28.9	1.1	-	42.2	33.3	50.6	-

Source : District-wise Statistical Bulletins, 1932,  
Economics and Statistics Division, State  
Planning Institute, U.P.



Table L.17

Block-wise Indicators of Socio-Economic Infrastructure

District/ Blocks	Lengths of Road Per Lakh of Popula- tion (Km.)	Lengths of Road Per Thousand sq. Km.	No. of Hospital/ PHC Per Lakh of Popula- tion	No. of Beds in Hospital Per Lakh of Popu- lation	No. of Junior Basic Schools Per Lakh of Popu- lation	No. of Senior Basic Schools Per Lakh of Popu- lation	No. of Higher Secondary Schools Per Lakh of Popu- lation	Popula- tion Per Commer- cial Banks (‘000)	Percentage of Electrified Villages to Total Inhabi- ted Villages
0	1	2	3	4	5	6	7	8	9
<b>Aligarh</b>									
Akrabad	72.0	259.0	2.0	8.0	80.0	18.0	5.0	20	100
Sindara Rao	69.7	260.2	3.1	12.5	60.3	15.6	3.1	19	100
<b>Allahabad</b>									
Handiya	88.8	535.1	3.9	19.7	50.3	15.78	9.9	17	100
Dhanupur	60.5	387.2	1.8	7.0	44.7	11.39	3.5	14	100
<b>Azamgarh</b>									
Thekna	63.3	311.0	3.6	14.3	50.9	10.7	2.7	19	97
Lalganj	44.5	237.7	3.1	21.5	52.9	10.7	5.4	26	87
<b>Etah</b>									
Sakit	90.5	271.5	2.7	-	63.0	22.2	3.5	14	71
<b>Etawah</b>									
Achhida	33.2	117.0	4.0	2.0	78.5	21.1	3.0	25	30
Bidhuna	59.9	196.8	2.0	13.8	79.6	18.7	9.8	25	27
<b>Fatehpur</b>									
Airaya	71.5	250.1	-	-	55.7	11.1	2.8	36	55
Asothar	53.8	161.7	1.8	7.3	62.0	13.7	3.6	20	78
Bahuwa	32.7	120.8	1.0	4.0	68.5	17.9	3.0	17	57

Contd.../-

Table I.17 (Contd.)

0	1	2	3	4	5	6	7	8	9
<b>Mainpuri</b>									
Sultanganj	77.9	312.8	3.2	13.0	90.1	30.8	3.2	12	96
Karhal	95.1	268.0	3.9	15.7	88.2	22.5	2.9	34	33
<b>Pratapgarh</b>									
Patti	50.0	214.3	3.5	16.3	74.5	16.3	5.8	17	50
Ashpur Deosara	45.1	218.0	1.0	5.8	67.1	13.4	3.8	15	58
Rampurkhas	59.3	250.0	1.4	31.8	57.1	8.7	4.3	28	46
<b>Rae Bareli</b>									
Harchandpur	61.3	198.5	7.5	25.0	63.8	20.0	3.8	13	100
Rahi	60.8	271.2	1.8	9.1	51.7	16.3	1.8	16	100
Amavan	43.6	160.9	2.7	8.2	64.0	10.9	1.4	24	100
Bahadurpur	108.1	352.3	3.8	11.4	58.8	13.3	1.9	18	100
<b>Bulandpur</b>									
Bhaddniyya	42.5	188.3	2.1	8.3	87.1	13.5	3.1	19	92
Lambhura	35.4	160.0	5.0	16.2	87.9	14.1	7.2	20	89

Source : District-wise Statistical Bulletins, 1989,  
Economics and Statistics Division, State  
Planning Institute, U.P.



Table I.13

General Locational Features of Sample Villages

		Distance of Facility from the Village in Km.					
District/Block	Village	Block	Tehsil Head-Quarter	Distri-ct Head Quarter	Near-est Town	Bus Sta-tion	Rail-way Sta-tion
<b>1. Etah</b>							
Sakit	Nigohhasanpur	11	17	17	17	3	17
Sakit	Aspur	5	13	13	13	5	15
<b>2. Fatehpur</b>							
Bahuwa	Suketi	20	24	24	5	-	13
Ariyha	Hasanpur Akuria	3	3	35	3	3	3
<b>3. Sultanpur</b>							
Bhadanyyan	Sakarsen	12	22	22	3	2	10
Lambhunia	Dharia Mau	10	40	30	10	10	10
<b>4. Azamgarh</b>							
Thokma	Chaterpur	10	12	50	10	5	26
Lalganj	Chowki Deo Gaon	3	5	47	5	3	35
<b>5. Rae Bareilly</b>							
Anawan	Ball Pawan Bujurg	13	13	13	3	3	15
Harchandpur	Gulupur	6	16	16	4	4	4
<b>6. Allahabad</b>							
Dharu Pur	Karari Bhadaili	3	3	46	3	4	4
Handia	Vira Pur Kasaudhan	3	3	46	3	2	2
<b>7. Mainpuri</b>							
Sultanganj	Sultanganj	1	11	13	11	-	11
Karhal	Bhantae	13	13	39	13	3	39
<b>8. Pratapgarh</b>							
Patti	Dhidul	15	15	41	15	4	12
Aspur							
Deosara	Bhushar	13	9	35	9	1	11
<b>9. Etawah</b>							
Baruwa		12	12	60	12	12	12
Guwari		6	12	50	6	6	6

Contd.../-



Table I.13 (Contd.)

District/Block	Village	Distance of Facility from the Village in Km.					
		Pucca Road	Post Office	Commercial Bank	Regulated Market	Primary School	Primary Health Centre
1. Etah							
Sakit	Nigohhasanpur	-	6	17	17	-	-
Sakit	Aspur	-	3	13	5	-	5
2. Fatehpur							
Bahuwa	Suketi	-	3	-	18	-	18
Ariyha	Hasanpur Akuria	1	2	3	3	-	2
3. Sultanpur							
Bhadanyyan	Sakarsaa	1	2	2	10	-	12
Lambhunja	Dharin Mau	5	2	4	5	-	7
4. Azamgarh							
Thekna	Chaterpur	1	1	3	3	1	5
Lalganj	Chowki Deo Gaon	1	3	3	1	1	1
5. Rae Bareilly							
Amawan	Ball Bawan Bujurg	6	3	6	3	-	3
Harchandpur	Gulupur	1	1	4	4	-	6
6. Allahabad							
Dhanu Pur	Karori Bhadeli	2	1	3	4	-	3
Handia	Vira Pur Kasaudhan	2	2	2	2	-	3
7. Mainpuri							
Sultanganj	Sultanganj	-	-	-	13	-	-
Karhal	Bhantoo	2	3	13	13	-	13
8. Pratapgarh							
Patti	Dhidul	1	-	6	6	-	-
Aspur							
Deosara	Bhushar	1	1	1	1	-	9
9. Etawah							
Baruwa		3	2	4	3	2	4
Guwari		2	2	4	6	-	6

Table 1.19Total and Household Population of Sample Villages

District/Block	Village	Total Population	No. of Households
<u>CL I</u>			
1. Etah			
Sakit	Nigohhasanpur	2490	460
Sakit	Aspur	795	156
2. Fatehpur			
Bahuwa	Suketi	2158	427
Ariyha	Hasanpur Akuria	1113	130
3. Sultanput			
Bhadanyyan	Sakarsae	1374	175
Lambhunia	Dharin Mau	772	221
4. Azamgarh			
Thakma	Chatarpur	462	196
Lalganj	Chowki Deo Gaon	274	53
5. Rae Bareli			
Amawan	Ball Bawan Bujurg	6502	1347
Harchandpur	Gulupur	2067	307
6. Allahabad			
Dhanu Pur	Karari Bhadaili	1205	174
Handia	Vira Pur Kasaudhan	392	113
7. Mainpuri			
Sultanganj	Sultanganj	3219	676
Karhal	Bhantee	3149	572
8. Pratapgarh			
Patti	Dhioul	1000	130
Aaspur Deosara	Bhushar	1047	145
9. Etawah			
	Baruwa	601	120
	Guwari	3359	672



Table 1.20Land Distribution in Sample Villages

Size of Holdings (in Hectare)	Share in Number of Holdings	Share in Total Area of Holdings
1. Marginal (Below 1.0)	64.89	27.51
2. Small (1.0 - 2.0)	26.70	41.52
3. Semi-Medium (2.0 - 4.0)	6.16	17.81
4. Medium and Large (4.0 and Above)	2.25	13.16
Total Holdings	100.00	100.00

Source : Records of Revenue Department.



Table 1.21Land Use Pattern in Sample Villages

Land Use Category	Per cent Area Under the Category to Total Reporting Area
Reporting Area	100.00
1. Forests	1.75
2. Barren and Unculturable Land	4.03
3. Land Under Non-agricultural Uses	4.31
4. Culturable Waste	12.96
5. Permanent Pastures and Other Grazing Land	1.11
6. Land Under Miscellaneous Tree Crops	0.58
7. Current Fallows	9.02
8. Other Fallows	18.52
9. Net Area Sown	47.72
Total Reporting Area	100.00

Source : Records of Revenue Department.

Table 1.22Cropping Pattern in the Sample Villages

Crop	Per Cent Area under Crop to Gross Cropped Area
Paddy	37.50
Jowar	2.35
Bajra	2.52
Maize	2.33
Arhar	3.67
Other pulses	0.03
Vegetables	0.17
Fodder	0.43
Others	0.41
<b>Total Kharif Crops</b>	<b>49.46</b>
Wheat	39.52
Barley	1.37
Gram	1.65
Pulses	1.34
Oilseeds	1.13
Vegetables	1.22
Fodder	0.46
Others	1.13
<b>Total Rabi Crops</b>	<b>47.98</b>
<b>Total Zaid Crops</b>	<b>1.57</b>
Sugarcane	0.89
<b>Gross Sown Area</b>	<b>100.00</b>

Source : Records of the Revenue Department.



Table I.23Area Irrigated by Different Sources in Sample Villages

Source	As per cent of Net Irrigated Area
1. Canals	61.36
2. Tubewells	36.56
(a) Private	32.09
(b) Public	4.47
3. Other Wells	0.35
4. Other Sources	1.23
Net Irrigated Area	100.00

Source : Records of the Revenue Department.



Table I.24Crop-wise Irrigated Area in Sample Villages

Crop	Per cent Irrigated Area Under Crops	Per cent to Gross Irrigated Area
Paddy	56.35	30.94
Jowar	6.41	0.22
Bajra	31.93	1.13
Maize	36.71	2.95
Arhar	2.05	0.11
Other Pulses	59.68	0.03
Vegetables	92.31	0.24
Fodder	38.39	0.23
Others	59.02	0.35
<b>Total Kharif Crops</b>	<b>50.12</b>	<b>35.30</b>
Wheat	39.52	51.93
Barley	30.39	1.62
Gram	33.33	0.81
Pulses	67.00	1.32
Oilseeds	90.24	1.46
Vegetables	72.23	1.30
Fodder	84.33	0.56
Others	73.47	1.36
<b>Total Rabi Crops</b>	<b>87.35</b>	<b>60.41</b>
<b>Total Zaid Crops</b>	<b>32.06</b>	<b>2.01</b>
Sugarcane	98.43	1.23
<b>Total Irrigated Area</b>	<b>68.42</b>	<b>100.00</b>

Source : Records of the Revenue Department.

Table 1.25Livestock Population in the Sample Villages

	per cent to Total Live- stock	Number of Live- stock per 100 Hectare N.S.A.
<b>Drought Animals</b>		
Bullock	13.33	60.8
Buffalo	6.56	21.2
<b>Milch Animals</b>		
Cow	10.84	35.0
Buffalo	14.26	16.0
<b>Youngstock</b>		
Cattle	6.07	19.6
Buffalo	5.61	18.1
<b>Others</b>		
Sheep	15.84	51.1
Goat	16.69	53.9
Pig	4.97	16.0
Donkey	0.10	0.3
Horse	0.25	0.8
<b>Total Livestock</b>	<b>100.00</b>	<b>322.9</b>



## CHAPTER II

### Findings Based Upon Group Discussions and Field Visits

#### II.1 Introduction

During the course of the field survey our research teams visited as many as 18 villages spread over 9 districts covered under U.P. Sodic Land Reclamation Project. Apart from the canvassing of detailed schedules from selected households group discussions were also organised in the village in which village pradhans, local level functionaries and a cross section of the cultivators participated. Discussions were organised on the basis of a structured questionnaire covering the various issues to be probed. Major findings based on the group discussions are summarised below.

#### II.2 General Economic Conditions

The entire area is suffering from acute economic poverty. Majority of rural population consists of small and marginal farmers. The land productivity was found to be generally very low. Agriculture was found to be the main source of livelihood with very little diversification of economic activity. Quality of livestock is extremely poor and animal husbandry has not developed on a noticeable scale. Similarly we found a general lack of rural industries. Thus there are little opportunities of non-agricultural employment in the region.



### II.3 Cropping Pattern

Cropping pattern is generally subsistence oriented with foodgrains dominating the cropping pattern. Paddy during kharif season and wheat during rabi season are the major crops in the area. Among other important crops grown in the area are coarse cereals like maize, bajra, jowar and barley and pulses like gram, peas, moong, urd and arhar. Among non-foodgrain crops mustard and sesame, potato and sugarcane are grown on a limited scale.

The main crop rotation in the region is paddy followed by wheat. Other crop rotations in vogue are wheat and sugarcane, maize and potato, maize and sugarcane. Mixed cropping is also popular in some areas major combinations being wheat and mustard, jowar and arhar, gram and alsin, gram and peas, gram and mustard.

The intensity of cropping is low due to lack of irrigation facilities. Rabi sowing depends upon the condition of moisture, which is influenced by the extent of rainfall during monsoons. Quite often the land is left fallow during the Rabi season. An exception to this was found in case of Chattarpur village of Azamgarh district, where some of the farmers take only Rabi crop on a particular piece of land and leave it fallow during Kharif season in anticipation of getting higher yield of Rabi crop next year. Increase in the sodic content of soil and the desire to improve fertility of soil were among the reasons mentioned for leaving land fallow apart from lack of irrigation facilities referred to above.

There has been hardly any noticeable change in the cropping pattern or the practice regarding leaving land fallow. Some additional area has, however, been brought under sugarcane and potato cultivation in Rae Bareilly district. In Pratapgarh district, sunflower cultivation has picked up. Green manuring has also increased to some extent.

#### II.4 Irrigation Facilities and Water Market

With the exception of one or two villages irrigation facilities were found to be inadequate. A number of villages surveyed were served by canals, but the supply was reported to be neither sufficient nor regular. Government tubewells were operating in very few villages. Private tubewells and pumpsets were among the major sources of irrigation in the surveyed villages.

The irrigation facility from canals and government tubewells was being availed wherever available. Charges for canal water were reported generally at Rs.60 per acre per season, but in Allahabad district it was reported at Rs.40 per acre. For sugarcane fields water charges were reported to be somewhat higher at Rs.80 per acre.

Sale and purchase of water from private tubewells and pumpsets is quite common in all the villages surveyed. Water rates were, however, found to vary from district to district. Though the charges for hiring water from private tubewells



reported ranged from Rs.8 per hour to Rs.18 per hour, the most commonly quoted water rates were between Rs.12 and Rs.15.

The need for better irrigation facilities was strongly expressed in all the villages. The farmers by and large expressed preference for increased water supply from government canals and tubewells. The small land base and the poor economic conditions of the vast majority of farmers seem to have constrained the capacity and willingness of the farmers to install their own tubewells and pumpsets.

#### II.5 Land Tenure and Leasing

The dominant form of farming in the region is that of owner-cultivator, with small and marginal holdings predominating.

Leasing out of land is legally prohibited in U.P., though share cropping is permitted. The practice of leasing out land is not common in the villages surveyed. The incidence of leasing would hardly be 10 per cent. The households who are leasing out land are either owners of very small holdings who have no means of cultivation or large owners having shortage of manpower. Hardly 1 per cent of the cultivators would be in the category of absentee landlords.

Terms of lease, which are oral and insecure, are generally uniform in all the villages surveyed. Half of the total expenditure on seed, fertilisers and irrigation is shared by the land owner whereas output is shared equally by the share cropper and the land owner.



## II.6 Common Property Resources

The situation regarding the common property resources varies across villages. While in some villages only around 10 - 20 acres under common lands were found, some other villages had more than 100 acres of common land. Some of the common lands are under water serving as water ponds. Mostly the common lands are used for animal grazing.

The problem of encroachment of common land was frequently come across. While in some villages the encroachment is mainly by the big and influential farmers, in others all categories of farmers - big and small - were found to have encroached on common lands with impunity.

Villagers supported the idea that common lands or wastelands should be distributed among the poor farmers and landless labourers. The general feeling was that land distribution would not adversely affect the weaker sections. However, the view was also expressed that redistribution of land would adversely affect the availability of common lands for grazing.

## II.7 Land Allotment

The programme of allotment of common land in small pieces of 2-3 acres has been introduced in the villages of the study area. However, the programme has met with varied success and on the whole the state of the affairs is far from satisfactory as the

majority of the allottees could not still get effective possession of lands.

The majority of the land allottees have previous experience of cultivation as agricultural labourers. However, some allottees had no previous cultivation experience.

In a number of cases where possession of acquired land has been obtained, the land is not under cultivation due to a variety of reasons including poor quality of land, lack of resources to buy agricultural input, or lack of experience.

There is no apparent social tension on land question in the surveyed villages though one or two instances of strong caste divisions were come across.

#### II.8 Wastelands and Their Reclamation

The phenomenon of wasteland was found all over the study area though its magnitude varies from village to village. Bulk of wasteland was suffering from high degree of salinity or alkalinity. The problem of water logging particularly along the canal sides was also acute in a number of villages. In other areas problem of ravines, rocky or sandy tracks was also come across. No noticeable increase in the area under wastelands over the last one or two decades was reported by the villagers.

The wastelands are generally scattered throughout the villages. However, in many instances wastelands comprise large compact tracts also.



The wastelands are generally lying barren. In some areas no bio mass is visible over them. Where some green cover exists the wastelands are used for grazing purposes, though in some cases harmful affects on the animals were also reported. Where circumstances permit wastelands are also being used for cultivation though the yields are poor.

Some of the wastelands have been reclaimed in the recent past by the villagers through their own efforts. In one village government subsidy was also availed off for the purpose. However, so far no large scale efforts by the government has been launched for wasteland reclamation in the project area.

The general opinion favoured reclamation of wastelands for cultivation and grazing purposes and supported its distribution to the poor. The estimate of required investment for land reclamation varied from Rs.10,000 to Rs.15,000 per acre.

Villages generally expressed their inability to contribute financially to the programme for land reclamation and favoured government efforts in this direction. However, people expressed their willingness to contribute their labour in the task.

## II.9 Female Labour

Women participation in economic activity was found limited in all the villages. By tradition the women folk of the upper caste households do not participate in agricultural operation even on their own fields. Only the females belonging to the backward castes and scheduled castes engage themselves in agricultural



operations on their own farms. In general the care of livestock is left in the hands of the women.

The cases of hired women workers were reported in limited agricultural operations like paddy transplantation and harvesting of crops.

The dearth of employment avenues in non-farm activities and absence of rural industries restrict the involvement of women labour in non-agricultural work. Only in two villages we found instance of a group of women workers engaged in industrial activities on a piece rate basis. In one case in Etah district they were engaged in spinning work and in one village of Mainpuri district they were engaged in bidi making.

#### II.10 People's Participation and Local Leadership

While there was general insistence on governmental efforts for provision of irrigation and other facilities and reclamation of wastelands, one also found a feeling of apathy and indifference to the existing developmental programmes and a lack of local initiative and leadership. Widespread illiteracy, poverty and economic backwardness have contributed to this atmosphere. The local level developmental functionaries have not been able to arouse peoples enthusiasm and popular participation in development programmes. Hence, there is a great need for streamlining the functioning of the local level functionaries and to make it more people oriented on the one hand and to educate the rural masses and develop local leadership to secure peoples participation in developmental programmes on the other.

## Chapter III

### Socio-Economic Characteristics of the Sample Household

#### III.1 Introduction

The field survey covered 18 villages spread over nine out of ten districts covered under the U.P. Sodic Land Reclamation Project (Table III.1). A total of 20 households were selected randomly for survey from each village. Thus the total sample consisted of 180 households. The salient socio-economic characteristics of the sample households emerging from the field study have been shown in the accompanying tables. The findings are summarised below.

#### III.2 Religion

94.4 per cent of the respondents belonged to the Hindu community while 5.6 per cent were Muslims (Table III.2).

#### III.3 Caste

Among the Hindu respondents 34.7 per cent belonged to the upper caste, 35.9 per cent to backward castes and 28.8 per cent to the scheduled castes while 1 respondent belonged to the scheduled tribes (Table III.3).

Out of the 10 Muslim respondents 7 belonged to backward castes while 3 to non-backward castes (Table III.3-A).



#### III.4 Size of Family

The average size of family came to 6.7 persons consisting of 3.8 males and 2.9 females per household (Table III.4).

#### III.5 Activity Status of Family Members

39.2 per cent of the family members were gainfully employed, 28.7 per cent were in schools, while 15.0 per cent were children (Table III.5).

#### III.6 Age Distribution

21.1 per cent were in the age group below 35 and 28.9 per cent were in the age group 35-45, while the remaining 50 per cent were above 45 years in age (Table III.6).

#### III.7 Educational Level

40.5 per cent of the respondents were illiterate, 16.1 per cent were literate, 22.2 per cent had received primary education and 11.1 per cent secondary education. Only 5 per cent of the respondents had a degree (Table III.7).

#### III.8 Main Occupation

91.6 per cent of the respondents had cultivation as their primary occupation, 2.2 per cent were agricultural labourers while another 2.2 per cent were non-agricultural labourers and 3.9 per cent were engaged in business and service (Table III.8).

#### III.9 Secondary Occupation

76 out of 180 respondents (42.2 per cent) also reported having a secondary occupation. Out of 76 persons reporting



secondary occupation, about 50 per cent were engaged in wage labour and another 26.3 per cent in cultivation. The remaining 25.7 per cent were engaged in miscellaneous activities as household industry, business, dairy, services etc. (Table III.9).

### III.10 Land Ownership

Average size of operational holding was 4.47 acres while that of ownerships holding was 4.30 acres (Table III.10). Net leased in area per household was only 0.17 acres or 3.8 per cent of the owned area (Table III.10).

The sample consists predominantly of self cultivating marginal and small farmers. 32.2 per cent of cultivators were marginal farmers (with holdings upto 2.5 acres), 42.8 per cent were small farmers (with holdings between 2.5 and 5.0 acres), 16.1 per cent farmers had holdings between 5.0 and 10.0 acres and 8.9 per cent had holdings above 10 acres (Table III.11).

### III.11 Occupational Structure of Household Members

39.2 per cent of the household members were engaged in some gainful economic activity. 87.5 per cent of the working members were engaged in cultivation on own farms, about 6.5 per cent were engaged as wage labour and 3.8 per cent in services (Table III.12).

Wage labour was the main occupational category in case of secondary occupation. 29.4 per cent of the members reporting secondary occupation were agricultural labourers and 23.9 per cent non-agricultural labourers while 16.3 per cent reported cultivation as secondary occupation (Table III.13). Thus, there

are very limited employment opportunities in the non-agricultural sector of the economy.

### III.12 Female Workers

27.8 per cent of female household members were engaged in economic activity whereas 6.6 per cent also reported some secondary activity (Table III.14).

Of the 147 working females 95.2 per cent were engaged in cultivation on own farm. In case of secondary occupation the most important category was agricultural labour in which 62.9 per cent female workers were engaged (Table III.15). Thus very few female household members are engaged in non-agricultural occupations either in the household or outside.

### III.13 Age Distribution of Family Members

The age structure of the households is dominated by younger age groups. 38.6 per cent of the family members were below 14 years of age, 21.2 per cent were in the age group 14-25, about 25 per cent in the age group 25-45 and only 15.3 per cent were in the age groups above 45 years (Table III.16).

### III.14 Educational Profile of Family members

Of the male household members 28.8 per cent were illiterate and 9.3 per cent literate. Remaining 61.9 per cent male members had received some formal education - 29.8 per cent upto primary level, 21.4 per cent upto secondary level, 5.5 per cent upto intermediate level and 5.2 per cent upto graduation level (Table III.17).



In case of female members, however, as many as, 62.2 per cent were illiterate and only 7.6 per cent were literate. 20.4 per cent female members had received primary education, 7 per cent secondary education upto intermediate and above (Table III.17).

### III.15 Employment Days

An average family worker is employed for 209 days in a year, out of which, 175 days are in primary occupation and 34 days in secondary occupation (Table III.18).

Table III.19 shows average annual working days in primary occupation by type of activity. In cultivation average employment days come to 168, agricultural labourers get work for 179 days in a year and non-agricultural workers for 172 days. In case of secondary occupation average annual employment comes to 64 days in cultivation, 85 days in dairying, 60 days in agricultural labour and 65 days in household industry (Table III.20). On the whole, there is sizeable under-employment in the study in all types of activity.



Table III.1List of Blocks and Villages Surveyed

District	Block	Village
Allahabad	Handiya Dhanupur	Virapur Kasaudhan Karari Badeli
Azamgarh	Thekma Lalganj	Chatterpur Chauki Deogaon
Etah	Sakit Sakit	Aaspur Nigoh Hassanpur
Etawah	Achhalda Bidhuna	Guwari Baruwa
Fatehpur	Airaya Bahuwa	Suketi Hassanpur Akuria
Mainpuri	Sultanganj Karhal	Sultanganj Bhantee
Pratapgarh	Patti Ashpur-Deosara	Dhidhuae Bhushr
Rae Bareli	Harchandpur Amavan	Gulupur Balla-Bawan
Sultanpur	Bhaddniyya Lambhuva	Sakarsee Dhariya Mau

Table III.2Distribution of Respondents by Religion

District	Hindu	Muslim	Others	Total
Allahabad	20 (100.00)	-	-	20 (100.00)
Azamgarh	19 (95.00)	1 ( 5.00)	-	20 (100.00)
Etah	18 (90.00)	2 (10.00)	-	20 (100.00)
Etawah	20 (100.00)	-	-	20 (100.00)
Fatehpur	20 (100.00)	-	-	20 (100.00)
Mainpuri	19 (95.00)	1 ( 5.00)	-	20 (100.00)
Pratapgarh	16 (80.00)	4 (20.00)	-	20 (100.00)
Rae Bareli	20 (100.00)	-	-	20 (100.00)
Sultanpur	18 (90.00)	2 (10.00)	-	20 (100.00)
Total	170 (94.44)	10 ( 5.56)	-	180 (100.00)

Note : Figures given in parentheses denote percentages.

Table III.3Distribution of Respondents by Caste (Hindu Only)

District	Upper Caste	Backward Caste	Scheduled Caste	Scheduled Caste	Total
Allahabad	11 (55.00)	7 (35.00)	2 (10.00)	—	20 (100.00)
Azamgarh	3 (15.79)	13 (68.43)	3 (15.79)	—	19 (100.00)
Etah	5 (27.78)	9 (50.00)	3 (16.67)	1 (5.58)	18 (100.00)
Etawah	8 (40.00)	4 (20.00)	8 (40.00)	—	20 (100.00)
Fatehpur	7 (35.00)	2 (10.00)	11 (55.00)	—	20 (100.00)
Mainpuri	3 (15.79)	10 (52.63)	6 (31.58)	—	19 (100.00)
Pratapgarh	5 (31.24)	5 (31.24)	6 (37.50)	—	16 (100.00)
Rae Bareilly	14 (70.00)	1 (5.00)	5 (25.00)	—	20 (100.00)
Sultanpur	3 (16.67)	10 (55.55)	5 (27.78)	—	18 (100.00)
Total	59 (34.70)	61 (35.88)	49 (28.83)	1 (5.00)	170 (100.00)

Note : Figures given in parentheses denote percentages.



Table III.3(a)

Distribution of Respondents by Caste (Muslims)

District	Backward	Non-backward	Total
Allahabad	-	-	-
Azamgarh	-	1 (100.00)	1 (100.00)
Etah	1 (50.00)	1 (50.00)	2 (100.00)
Etawah	-	-	-
Fatehpur	-	-	-
Mainpuri	1 (100.00)	-	1 (100.00)
Pratapgarh	4 (100.00)	-	4 (100.00)
Rae Bareli	-	-	-
Sultanpur	1 (50.00)	1 (50.00)	2 (100.00)
Total	7 (70.00)	3 (30.00)	10 (100.00)

Note : Figures in parentheses denote percentages.

Table III.4Distribution of Family Members By Sex Per Household

Districts	Male	Female	Total
Allahabad	4.35 (50.87)	4.20 (49.13)	8.55 (100.00)
Azamgarh	3.15 (54.79)	2.60 (45.21)	5.75 (100.00)
Etah	4.25 (56.29)	3.30 (43.71)	7.55 (100.00)
Etawah	3.60 (64.28)	2.00 (35.72)	5.60 (100.00)
Fatehpur	3.60 (53.33)	3.15 (46.67)	6.75 (100.00)
Mainpuri	3.80 (55.48)	3.05 (44.52)	6.85 (100.00)
Pratapgarh	3.30 (54.10)	2.80 (45.90)	6.10 (100.00)
Rae Bareli	4.15 (60.14)	2.75 (39.86)	6.90 (100.00)
Sultanpur	3.65 (58.40)	2.60 (41.60)	6.25 (100.00)
All Districts	3.76 (56.12)	2.94 (43.88)	6.70 (100.00)

Note : Figures in brackets show per cent to total.

Table III.5

Distribution of Family Members By Activity Status

Districts	Child- ren	Student	Working	Unemp- loyed	House- wife	Disabled & Retired	Total
Allahabad	18.13	25.73	33.92	1.75	19.30	1.71	100.00
Azamgarh	26.08	20.00	48.70	0.87	3.48	0.87	100.00
Etah	13.91	31.78	31.78	2.65	19.21	0.67	100.00
Etawah	4.46	34.82	52.68	-	8.04	-	100.00
Fatehpur	15.55	25.18	37.04	1.48	18.52	2.23	100.00
Mainpuri	8.03	36.50	40.87	1.46	11.68	1.46	100.00
Pratapgarh	22.13	17.22	41.80	-	16.40	2.45	100.00
Rae Bareli	12.32	37.68	31.15	-	16.67	2.18	100.00
Sultanpur	14.40	28.00	41.60	-	14.40	1.60	100.00
All Districts	15.00	28.69	39.22	1.00	14.68	1.41	100.00



Table III.6  
Distribution of Respondents by Age-Group

Districts	Below 25	25-35	35-45	45-55	55-60	60 and Above	Total
Allahabad	-	5 (25.00)	5 (25.00)	3 (15.00)	4 (20.00)	3 (15.00)	20 (100.00)
Azamgarh	1 ( 5.00)	5 (25.00)	5 (25.00)	2 (10.00)	2 (10.00)	5 (25.00)	20 (100.00)
Etah	-	2 (10.00)	6 (30.00)	7 (35.00)	2 (10.00)	3 (15.00)	20 (100.00)
Etawah	-	4 (20.00)	9 (45.00)	4 (20.00)	2 (10.00)	1 ( 5.00)	20 (100.00)
Fatehpur	-	-	6 (30.00)	7 (35.00)	3 (15.00)	4 (20.00)	20 (100.00)
Mainpuri	-	2 (10.00)	7 (35.00)	5 (25.00)	1 ( 5.00)	5 (25.00)	20 (100.00)
Pratapgarh	2 (10.00)	6 (30.00)	5 (25.00)	4 (20.00)	1 ( 5.00)	2 (10.00)	20 (100.00)
Rae Bareli	-	3 (15.00)	4 (20.00)	6 (30.00)	3 (15.00)	4 (20.00)	20 (100.00)
Sultanpur	-	8 (40.00)	5 (25.00)	2 (10.00)	1 ( 5.00)	4 (20.00)	20 (100.00)
Total	3 ( 1.66)	35 (19.44)	52 (28.89)	40 (22.22)	19 (10.55)	31 (17.22)	180 (100.00)

Note : Figures in brackets show per cent to total.

Table III.7

Distribution of Respondents by Education

Districts	Illite- rate	Literate	Primary	Secondary	Inter- mediate	Gradua- tion	Total
Allahabad	5 (25.00)	6 (30.00)	6 (30.00)	-	2 (10.00)	1 (5.00)	20 (100.00)
Azamgarh	13 (65.00)	2 (10.00)	5 (25.00)	-	-	-	20 (100.00)
Etah	5 (25.00)	3 (15.00)	7 (35.00)	3 (15.00)	1 (5.00)	1 (5.00)	20 (100.00)
Etawah	9 (45.00)	6 (30.00)	5 (25.00)	-	-	-	20 (100.00)
Fatehpur	10 (50.00)	1 (5.00)	6 (30.00)	1 (5.00)	2 (10.00)	-	20 (100.00)
Mainpuri	6 (30.00)	4 (20.00)	1 (5.00)	5 (25.00)	1 (5.00)	3 (15.00)	20 (100.00)
Pratapgarh	7 (35.00)	2 (10.00)	3 (15.00)	5 (25.00)	1 (5.00)	2 (10.00)	20 (100.00)
Rae Bareli	8 (40.00)	2 (10.00)	3 (15.00)	5 (25.00)	1 (5.00)	1 (5.00)	20 (100.00)
Sultanpur	10 (50.00)	3 (15.00)	4 (20.00)	1 (5.00)	1 (5.00)	1 (5.00)	20 (100.00)
Total	73 (40.53)	29 (16.12)	40 (22.23)	20 (11.12)	9 (5.00)	9 (5.00)	180 (100.00)

Note : Figures in brackets show per cent to total.

Table III.8

Distribution of Respondents by Occupation (Primary)

Districts	Cultiva- tion on own Farm	Cultiva- tion on other Farm	Agricul- ture Labour	Non-agri- culture Labour	Busi- ness	Service	Total
Allahabad	20 (100.00)	-	-	-	-	-	20 (100.00)
Azamgarh	20 (100.00)	-	-	-	-	-	20 (100.00)
Etah	15 (75.00)	1 (5.00)	2 (10.00)	-	2 (10.00)	-	20 (100.00)
Etawah	20 (100.00)	-	-	-	-	-	20 (100.00)
Fatehpur	12 (60.00)	1 (5.00)	2 (10.00)	4 (20.00)	-	1 (5.00)	20 (100.00)
Mainpuri	16 (80.00)	-	-	-	-	4 (20.00)	20 (100.00)
Pratapgarh	20 (100.00)	-	-	-	-	-	20 (100.00)
Rae Bareli	20 (100.00)	-	-	-	-	-	20 (100.00)
Sultanpur	20 (100.00)	-	-	-	-	-	20 (100.00)
Total	163 (90.56)	2 (1.11)	4 (2.22)	4 (2.22)	2 (1.11)	5 (2.78)	180 (100.00)

Note : Figures in brackets show per cent to total.



Table III.9

## Distribution of Respondents by Secondary Occupation

Districts	Cultiva- tors	Cultiva- tion on other Farm	Agricul- ture Labour	Diary	Non-agri- culture Labour	Business	House- hold Industry	Constru- ction	Transport	Service	Other	Total
Allahabad	-	-	5 (62.50)	-	1 (12.50)	-	-	-	-	2 (25.00)	-	8 (100.00)
Azamgarh	2 (33.34)	-	2 (33.34)	-	1 (16.66)	-	-	1 (16.66)	-	-	-	6 (100.00)
Etah	4 (50.00)	1 (12.50)	1 (12.50)	-	-	1 (12.50)	1 (12.50)	-	-	-	-	8 (100.00)
Etawah	-	-	-	-	2 (100.0)	-	-	-	-	-	-	2 (100.00)
Fatehpur	6 (50.00)	-	-	4 (33.33)	-	2 (16.67)	-	-	-	-	-	12 (100.00)
Mainpuri	4 (30.77)	1 (7.69)	-	1 (7.69)	5 (38.47)	-	1 (7.69)	-	-	1 (7.69)	-	13 (100.00)
Pratapgarh	-	2 (16.67)	6 (50.00)	1 (8.33)	2 (16.67)	-	1 (8.33)	-	-	-	-	12 (100.00)
Rae Bareli	-	-	4 (50.00)	-	-	1 (12.50)	1 (12.50)	-	-	-	2 (25.00)	8 (100.00)
Sultanpur	-	-	-	-	6 (85.71)	-	-	1 (14.29)	-	-	-	7 (100.00)
Total	16 (21.05)	4 (5.26)	18 (23.68)	2 (2.63)	21 (27.63)	5 (6.58)	3 (3.98)	2 (2.63)	-	3 (3.94)	2 (2.63)	76 (100.00)

Note : Figures in brackets show Per cent to total.

Table III.10

Area Owned, Leased and Operated Per Household

(Figures in Acres)

Districts	Area Owned	Area Leased in	Area Leased out	Total Oper- ated Area
Allahabad	4.40	0.03	-	4.43
Azamgarh	2.22	0.23	-	2.45
Etah	4.71	0.41	0.10	5.02
Etawah	2.78	-	-	2.78
Fatehpur	5.02	0.44	0.12	5.34
Mainpuri	4.29	0.67	0.23	4.73
Pratapgarh	4.39	0.13	-	4.52
Rae Bareli	7.64	0.05	-	7.69
Sultanpur	3.22	0.05	-	3.27
All Districts	4.30	0.22	0.05	4.47

Table III.11

Distribution of Land Holding by Size

Districts	Size of Holding in Acres					Total
	Upto 2.5	2.5 to 5.0	5.0 to 7.5	7.5 to 10.0	10.0 & Above	
Allahabad	5 (25.00)	8 (40.00)	4 (20.00)	1 (5.00)	2 (10.00)	20 (100.00)
Azamgarh	14 (70.00)	5 (25.00)	-	1 (5.00)	-	20 (100.00)
Etah	3 (15.00)	11 (55.00)	1 (5.00)	3 (15.00)	2 (10.00)	20 (100.00)
Etawah	10 (50.00)	6 (30.00)	3 (15.00)	1 (5.00)	-	20 (100.00)
Fatehpur	7 (35.00)	7 (35.00)	1 (5.00)	2 (10.00)	3 (15.00)	20 (100.00)
Mainpuri	3 (15.00)	13 (65.00)	1 (5.00)	1 (5.00)	2 (10.00)	20 (100.00)
Pratapgarh	5 (25.00)	9 (45.00)	3 (15.00)	1 (5.00)	2 (10.00)	20 (100.00)
Rae Bareilly	4 (20.00)	7 (35.00)	4 (20.00)	1 (5.00)	4 (20.00)	20 (100.00)
Sultanpur	7 (35.00)	11 (55.00)	1 (5.00)	-	1 (5.00)	20 (100.00)
Total	58 (32.22)	77 (42.78)	18 (10.00)	11 (6.11)	16 (8.89)	180 (100.00)

Note : Figures given in parentheses denote percentages to total.



Table III.12

Distribution of Family Members by Primary Occupation

Districts	Cultiva- tion on Own Farm	Cultiva- tion on Others Farm	Agricul- tural Labour	Allied Agricul- tural Activities	Non- Agricul- tural Labour	Business	Const- tuction	Service	Total
Allahabad	54 (26.42)	-	-	-	-	-	-	2 (3.57)	56 (100.00)
Azamgarh	56 (100.00)	-	-	-	-	-	-	-	56 (100.00)
Etah	32 (66.67)	2 (4.17)	4 (8.33)	-	6 (12.50)	1 (2.08)	1 (2.08)	2 (4.17)	48 (100.00)
Etawah	57 (93.44)	2 (3.28)	-	-	-	-	-	2 (3.28)	61 (100.00)
Fatehpur	27 (54.00)	2 (4.00)	4 (8.00)	2 (4.00)	12 (24.00)	-	-	3 (6.00)	50 (100.00)
Mainpuri	49 (87.50)	-	-	-	2 (3.57)	-	-	5 (8.93)	56 (100.00)
Pratapgarh	43 (94.12)	-	-	-	2 (3.92)	-	-	1 (1.96)	51 (100.00)
Rae Bareli	37 (90.70)	-	-	1 (2.33)	-	-	-	3 (6.98)	43 (100.00)
Sultanpur	52 (100.00)	-	-	-	-	-	-	-	52 (100.00)
Total	414 (87.53)	6 (1.27)	8 (1.59)	3 (0.63)	22 (4.65)	1 (0.21)	1 (0.21)	18 (3.81)	473 (100.00)

Note : Figures given in parentheses denote percentages.

Table III.13

## Distribution of Family Members by Secondary Occupation

Districts	Cultiva- tion on Own Farm	Cultiva- tion on Others Farm	Agricul- tural Labour	Dairy	Allied Agricul- tural Activities	Non- Agricul- Labour	Business	House- hold Industry	Const- tuction	Service	Total
Allahabad	1 (4.33)	2 (9.09)	11 (50.00)	-	2 (9.09)	2 (9.09)	2 (9.09)	2 (9.09)	-	-	22 (100.00)
Azamgarh	-	-	3 (18.75)	2 (12.50)	-	8 (50.00)	-	-	1 (6.25)	2 (12.50)	16 (100.00)
Etah	7 (43.75)	4 (24.00)	1 (6.25)	-	-	1 (6.25)	3 (18.75)	-	-	-	16 (100.00)
Etawah	-	-	6 (31.58)	-	-	7 (36.84)	-	-	-	6 (31.58)	19 (100.00)
Fatehpur	8 (44.45)	-	1 (5.55)	-	-	5 (27.78)	3 (16.67)	-	-	1 (5.55)	18 (100.00)
Mainpuri	4 (19.05)	4 (19.05)	1 (4.76)	-	2 (9.52)	6 (28.58)	2 (9.52)	1 (4.76)	-	1 (4.76)	21 (100.00)
Pratapgarh	9 (34.62)	2 (7.69)	12 (46.15)	1 (3.85)	2 (7.69)	-	-	-	-	-	26 (100.00)
Rae Bareli	1 (3.70)	-	14 (51.85)	-	-	2 (7.41)	5 (18.52)	-	-	5 (18.52)	27 (100.00)
Sultanpur	-	-	5 (26.32)	1 (5.26)	-	13 (68.42)	-	-	-	-	19 (100.00)
Total	30 (16.30)	12 (6.52)	54 (29.35)	4 (2.17)	6 (3.26)	44 (23.91)	15 (8.16)	3 (1.63)	1 (0.54)	15 (8.16)	184 (100.00)

Note : Figures given in parentheses denote percentages.



Table III.14

Distribution of Female Workers by Primary and Secondary Occupation

Districts	Primary Activity	Secondary Activity
Allahabad	20 (23.18)	2 ( 2.38)
Azamgarh	24 (46.15)	-
Etah	11 (16.67)	2 ( 3.05)
Etawah	20 (50.00)	8 (20.00)
Fatehpur	8 (12.70)	2 ( 3.17)
Mainpuri	19 (13.15)	4 ( 6.56)
Pratapgarh	20 (35.71)	7 (12.50)
Rae Bareli	6 (10.91)	4 ( 4.27)
Sultanpur	19 (36.54)	6 (11.54)
Total	147 (27.79)	35 (16.62)

Note : Figures in parentheses denote per cent of female workers to total female population.



Table III.15Distribution of Female Workers by Type of Activity

Activity	Primary Occupation	Secondary Occupation
1. Cultivation on own farm	140 (95.24)	-
2. Cultivation on others farm	2 (1.36)	5 (14.29)
3. Agricultural Labour	4 (2.72)	22 (62.86)
4. Dairy	-	3 (8.57)
5. Other Allied Agricultural Activity	-	1 (2.86)
6. Non-Agricultural Labour	1 (0.68)	1 (2.86)
7. Household Industry	-	1 (2.86)
8. Service	-	2 (5.70)
Total	147 (100.00)	35 (100.00)

Note : Figures in parentheses denote percentages.

Table III.16

Percentage Distribution of Family Members by Age Groups

Districts	Below 14	14-24	25-34	35-44	45-54	55-64	60 and Above	Total
Allahabad	45.03	19.20	15.20	7.03	5.26	2.92	5.26	100.00
Azamgarh	46.08	13.05	11.30	13.91	4.35	3.48	7.83	100.00
Etah	35.09	24.50	14.57	9.94	9.94	1.99	3.97	100.00
Etawah	30.36	31.25	9.82	14.29	7.14	5.36	1.79	100.00
Fatehpur	37.04	18.52	14.07	9.63	10.37	4.44	5.93	100.00
Mainpuri	34.31	21.17	10.94	17.52	6.57	1.46	8.03	100.00
Pratapgarh	40.16	17.21	19.67	7.38	4.92	3.28	7.36	100.00
Rae Bareli	40.38	23.19	12.32	9.42	7.25	2.17	5.07	100.00
Sultanpur	36.80	23.20	18.40	9.60	4.80	1.60	5.60	100.00
Total	38.56	21.23	14.10	10.78	6.80	2.90	5.63	100.00



Table III.17

## Percentage Distribution of Family Members by Education

Districts	Illiterate		Literate		Primary		Secondary		Intermediate		Graduate	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Allahabad	22.99	75.00	8.05	4.76	33.33	16.67	19.54	3.57	4.60	-	11.49	-
Azamgarh	46.03	86.54	11.12	3.85	30.16	9.61	9.52	-	3.17	-	-	-
Etah	20.00	56.06	8.24	3.03	32.94	27.27	25.88	10.61	5.88	1.52	7.06	1.52
Etawah	22.22	47.50	11.11	12.50	31.94	27.50	20.83	12.50	11.11	-	2.78	-
Fatehpur	31.94	63.49	6.94	6.35	36.11	23.81	15.28	4.76	8.33	1.59	1.39	-
Mainpuri	23.68	42.62	11.84	9.84	23.68	19.67	36.84	16.39	2.63	11.48	1.32	-
Pratapgarh	34.85	80.36	3.03	5.36	27.27	10.71	18.18	1.79	7.58	-	9.03	1.79
Rae Bareilly	28.92	36.36	4.82	7.27	32.53	38.18	20.48	10.91	3.61	3.64	9.64	3.64
Sultanpur	31.25	65.38	19.18	19.23	19.18	11.54	23.29	3.85	2.74	-	1.37	-
Total	28.80	42.19	9.31	7.56	29.84	20.42	21.42	6.99	5.47	2.08	5.17	0.76



Table III.18Average Annual Working Days in Primary and  
Secondary Occupation

Districts	Primary	Secondary	Total
Allahabad	168	27	195
Azamgarh	158	26	184
Etah	198	30	228
Etawah	197	47	224
Fatehpur	191	34	225
Mainpuri	178	42	220
Pratapgarh	153	27	180
Rae Bareli	209	53	262
Sultanpur	128	24	152
Total	175	34	209

Note : Employment Days have been calculated for the workers in Primary activity.

Table III.19

Average Annual Working Days in Primary Occupation  
by Type of Activity

Districts	Culti- vation on Own Farm	Culti- vation on Others Farm	Agricul- tural Labour	Allied Agricul- tural Activi- ties	Non- Agricul- tural Labour	Busi- ness	Constr- uction	Service
Allahabad	161	-	-	-	-	-	-	333
Azamgarh	158	-	-	-	-	-	-	-
Etah	179	180	215	-	215	360	180	365
Etawah	195	150	-	-	-	-	-	300
Fatehpur	200	120	143	150	182	-	-	287
Mainpuri	164	-	-	-	100	-	-	342
Pratapgarh	152	-	-	-	120	-	-	365
Rae Bareli	198	-	-	200	-	-	-	365
Sultanpur	128	-	-	-	-	-	-	-
Total	168	150	179	167	172	180	335	

Note : Employment Days have been calculated for persons engaged in the particular activity.



Table III.20

Average Annual Working Days in Secondary Occupation  
by Type of Activity

Districts	Culti- vation on Own Farm	Culti- vation on Others Farm	Agricul- tural Labour	Dairy	Allied Agricul- tural Activi- ties	Non- Agricul- tural Labour	Busi- ness	House- hold Industry	Constr- uction	Service
Allahabad	30	23	67	-	105	50	150	58	-	-
Azamgarh	-	-	25	75	-	74	-	-	60	315
Etah	112	25	150	-	-	50	117	-	-	-
Etawah	-	-	62	-	-	60	-	-	-	343
Fatehpur	101	-	30	-	-	96	93	-	-	100
Mainpuri	38	125	80	-	260	73	150	80	-	300
Pratapgarh	30	63	66	100	90	-	-	-	-	-
Rae Bareli	150	-	44	-	-	53	108	-	-	174
Sultanpur	-	-	76	90	-	58	-	-	-	-
Total	64	64	60	85	137	67	118	65	60	264

Note : Employment Days have been calculated for persons engaged in Particular Activity.



## CHAPTER IV

### Land Use, Cropping Pattern and Irrigation

#### IV.1 Introduction

In this chapter we have discussed the land use pattern, cropping pattern as well as extent and sources of irrigation on the sample farms on the basis of the information furnished by the respondents.

#### IV.2 Land Use Pattern

Land use pattern indicates the level of agricultural development on the one hand and the efficiency of land resource management on the other. Table IV.1 shows percentage distribution of operated area under different uses on the sample farms. Over all net area sown comes to 72.0 per cent of total operated area on the sample farms. The households of district Azamgarh have reported highest net area sown (91.9 per cent of the total operated area) followed by district Allahabad (where net area sown of the sample households is recorded 83.2 per cent of the operated area). But in districts like Etawah and Mainpuri, the area under cultivation is only around 61 per cent of the operated area. Data on wasteland found in the sample households of 9 districts indicate that on an average 21.0 per cent of the total operated area is under wasteland. The proportion of area under wasteland varied from 7.3 per cent to 38.9 per cent of the total operated area (Table IV.2).

The practice of leaving fallow land is not found common in the sample households of the project area. The sample households in districts like Azamgarh, Etah, Etawah and Mainpuri have not reported any fallow land. Data pertaining to area under orchards reveals that fruit cultivation is not found in the sample villages. On an average only 3.3 per cent of the operated area is kept for orchards by the sample households. Sample households in three districts did not report any area under orchard, namely, Etah, Etawah and Mainpuri.

Table IV.2 indicates per household area under different land uses. Per household net area sown is worked out to 3.22 acres. It varies from 1.70 acres in district Etawah to 6.00 acres in district Rae Bareli. Per household average operated area is recorded at 4.47 acres. However differentials are found among the sample districts. In district Etah, per household operated area is lowest (2.78 acres), whereas it is highest in district Rae Bareli (7.69 acres). Area under orchards and area kept under fallow is not significant in the sample households. On an average, per household area under wasteland is 0.94 acres. It varies from 0.18 acre in district Azamgarh to 1.84 acres in district Mainpuri. About 90 per cent of area under wasteland was reported to be culturable wasteland.

Taking all the sample households together, per household average gross cropped area is recorded at 5.83 acres. A wide variation is observed among the sample districts in gross cropped area at household level. About 82 per cent of the net area sown



sown is cultivated more than once. The percentage of net sown area sown more than once is recorded highest in district Etah (98 per cent). The corresponding figure is found only 47.2 per cent in district Etawah (Table IV.2).

#### IV.3 Land Degradation

Table IV.3 reports per household cultivated area suffering from different degree of land degradation on account of wind and soil erosion, salinity, alkalinity, etc. The extent of land degradation comes to 36 per cent of the area under cultivation for the sample as a whole. But in districts Azamgarh, Etawah and Mainpuri the proportion of degraded land was found to be much higher. Nearly half of the degraded area was suffering from a moderate or severe degree of land degradation. Again the degree of land degradation was found to be above average in district Azamgarh and Mainpuri.

#### IV.4 Cropping Pattern

As shown in Table IV.4 paddy and wheat are the main crops grown by the sample households in the project area, constituting more than 80 per cent of the total cropped area. Paddy alone shares about 42 per cent of the total cropped area. Though other crops such as jowar, bajra, maize and pulses in Kharif season and barley, oilseeds and potato in Rabi season are also cultivated by the sample households in the project area, but these crops do not cover a significant area. 93.5 per cent of cropped area is under



foodgrains. Merely 6.5 per cent of the total cropped area is under commercial crops such as oilseeds, sugarcane and vegetables. In Etah district area under paddy and wheat (51.9 per cent) was relatively lower, while area under maize and pulses was relatively higher.

#### IV.5 Irrigation and Its Sources

Table IV.5 shows the proportion of irrigated area under different crops on the sample farms. Taking all the sample households together, it is found that 93.3 per cent of the gross cropped area is irrigated by different sources. By and large a similar pattern is recorded as far as proportion of irrigated area in total gross cropped area is concerned among the sample districts. About 97.74 per cent of the gross cropped area is irrigated under paddy crop with a marginal variation among the districts. Districts Azamgarh, Fatehpur and Pratapgarh have all the area under paddy crop under irrigation. In the case of wheat, almost all the districts have fully irrigated area. In the case of sugarcane and potato crops whole area is found irrigated in the sample households (Table IV.5). Similarly the area under oilseeds is fully irrigated in all the districts except in district Rae Bareli where the corresponding figure stands at 80 per cent. Area under coarse cereals like jowar, bajra, maize, gram and pulses receives relatively lower extent of irrigation.

In looking at the high proportion of irrigated area on the sample farms, one must remember that a field receiving even one

irrigation is included in the irrigated area. Canals are the major source of irrigation in the study area, from which water supply is highly irregular and inadequate. The proportion of area irrigated more than once is quite low. During the field visit the villagers made a strong plea for greater water facility.

For all the sample households nearly 40 per cent area was irrigated by canals, another 40 per cent area was irrigated by tubewells and about 20 per cent by pumpsets (Table IV.6). There are, however, marked differences across villages in the relative importance of different means of irrigation. The practice of hiring out water from tubewells and pumpsets is quite common and accounts for nearly half of the area irrigated by these means. Adding area irrigated by canals to this, irrigation through hired sources would come to nearly 60 per cent of total irrigated area.



File IV-3

Learn the Pattern on Sample Form

District	Per cent of Operated Area to be				
	Gov. Area Land	Private Land	Schools	Private Land	Total Operated Area
Allahabad	35.2	1.9	5.0	2.9	45.00
Aurangabad	34.5	—	6.1	2.4	43.00
Bach	14.0	—	—	1.2	15.20
Bahraich	11.8	—	—	25.0	36.80
Bansgarh	6.5	0.4	3.8	11.3	21.90
Bareilly	41.1	—	—	11.0	52.10
Batala	71.1	0.6	7.1	2.2	81.00
Bawal	28.3	2.1	1.5	1.1	33.00
Bulandshahr	10.7	4.3	0.1	0.9	16.00
Total	34.3	2.2	3.6	5.0	45.10



Table IV.2

Per Household Area Under Different Land Uses

(Acres)

Districts	Net Fallow Area Land Sown	Dr- chards	Waste- land	Total Opera- ted Area	Gross Crop- ped Area	Area Sown More than Once	Cropping Inten- sity	
Allahabad	3.69	0.09	0.22	0.43	4.43	6.3	2.6	170
Azamgarh	2.25	-	0.02	0.18	2.45	3.9	1.7	176
Etah	3.47	-	-	1.56	5.02	6.9	3.4	198
Etawah	1.70	-	-	1.08	2.78	2.5	0.8	148
Fatehpur	3.43	0.02	0.37	1.53	5.34	6.8	3.3	198
Mainpuri	2.89	-	-	1.84	4.73	5.0	2.6	189
Pratapgarh	3.25	0.25	0.43	0.60	4.52	5.9	2.7	183
Rae Bareli	6.00	0.72	0.37	0.61	7.69	10.9	4.9	181
Sultanpur	2.30	0.20	0.15	0.62	3.27	3.9	1.6	170
Total	3.22	0.13	0.17	0.94	4.47	5.8	2.6	182

Table IV.3

Per Household Cultivated Area Suffering From  
Degradation (Acres)

Districts	Mild Degradation	Moderate Degradation	Service Degradation	Total
Allahabad	0.22 (5.83)	0.46 (12.54)	0.18 (4.76)	0.86 (23.13)
Azamgarh	0.72 (31.76)	1.30 (57.91)	-	2.02 (89.67)
Etah	0.36 (10.46)	0.05 (1.44)	-	0.41 (11.90)
Etawah	1.56 (91.91)	-	-	1.56 (91.91)
Fatehpur	0.19 (5.55)	-	0.03 (0.73)	0.22 (6.28)
Mainpuri	0.26 (8.91)	1.73 (59.99)	-	1.99 (68.90)
Pratapgarh	0.50 (15.52)	0.16 (4.98)	0.14 (4.42)	0.80 (24.92)
Rae Bareli	1.03 (17.23)	0.71 (11.88)	0.16 (2.53)	1.90 (31.64)
Sultanpur	0.62 (26.97)	0.15 (6.52)	-	0.77 (33.49)
Total	0.61 (18.85)	0.51 (15.79)	0.05 (1.71)	1.17 (36.35)

Note : Figures in brackets show percentage to total operated area.



Table IV.4  
Cropping Pattern on Sample Farms

Districts	Area Under Different Crops as Per cent of Gross Cropped Area												
	Paddy	Jowar	Bajra	Maize	Pulses	Wheat	Barley	Gram	Oil Seeds	Sugar- cane	Potato	Others	Total Crop- ped Area
Allahabad	41.6	-	0.6	-	5.4	41.0	-	2.8	0.7	6.8	0.3	0.8	100.0
Azamgarh	46.1	-	-	-	1.9	39.8	-	4.1	1.2	4.2	2.7	-	100.0
Etah	25.2	0.9	2.2	12.8	15.8	26.7	4.9	5.0	0.6	-	1.3	4.6	100.0
Etawah	42.6	-	-	1.0	-	36.6	-	10.9	-	4.0	4.9	-	100.0
Fatehpur	47.6	2.0	-	-	5.0	39.6	0.2	4.2	-	4.0	4.9	-	100.0
Mainpuri	42.7	0.9	1.1	0.2	4.8	43.1	-	2.8	1.1	0.2	3.1	-	100.0
Pratapgarh	46.9	1.0	-	0.8	-	42.6	-	0.7	1.9	2.8	1.3	2.0	100.0
Rae Bareilly	42.6	2.3	-	-	-	40.6	1.9	3.2	1.9	5.1	1.0	1.4	100.0
Sultanpur	47.7	-	-	-	3.8	37.7	-	3.9	1.2	4.6	1.1	-	100.0
Total	41.9	1.1	0.4	2.7	4.2	38.5	1.1	3.6	1.0	3.1	1.2	1.2	100.0



Table IV.5

Per cent Irrigated Area Under Different Crops on Sample Farms

Districts	Paddy	Jowar	Bajra	Maize	Pulses	Wheat	Barley	Gram	Oil Seeds	Sugar- cane	Potato	Total Crop- ped Area
Allahabad	99.3	-	68.5	-	37.0	100.0	-	17.3	100.0	100.0	100.0	93.1
Azamgarh	100.0	-	-	-	52.4	100.0	-	-	100.0	100.0	100.0	93.8
Etah	99.4	66.7	100.0	100.0	100.0	100.0	100.0	-	100.0	-	100.0	90.0
Etawah	100.0	-	-	-	-	100.0	-	-	-	100.0	100.0	88.1
Fatehpur	92.3	100.0	-	-	100.0	98.1	100.0	65.8	-	100.0	-	93.3
Mainpuri	98.1	62.5	33.3	34.8	52.1	100.0	-	-	100.0	100.0	100.0	89.2
Pratapgarh	100.0	45.6	-	100.0	100.0	100.0	-	58.7	100.0	100.0	100.0	93.7
Rae Bareilly	97.0	-	-	-	-	100.0	44.5	4.2	80.1	100.0	100.0	94.4
Sultanpur	98.2	-	-	-	44.1	100.0	-	-	100.0	100.0	100.0	93.2
Total	97.7	42.2	79.5	77.0	77.1	99.7	79.1	13.4	82.5	100.0	100.0	93.3

Table IV.6

Source-wise Irrigated Area on Sample Farms (Per cent)

Districts	Owned Tube- wells	Hired Tube- wells	Govt. Tube- wells	Owned Pump- sets	Hired Pump- sets	Canals	Other Sources	Total Irriga- ted Area
Allahabad	10.8	11.6	3.6	4.9	21.7	45.6	1.8	100.0
Azamgarh	32.5	10.8	-	6.0	2.5	48.2	-	100.0
Etah	15.6	9.1	-	48.0	1.3	26.0	-	100.0
Etawah	-	53.6	10.6	-	-	35.8	-	100.0
Fatehpur	31.7	16.0	3.0	-	1.5	42.8	5.0	100.0
Mainpuri	26.5	25.1	-	16.0	0.7	30.0	1.7	100.0
Pratapgarh	28.5	10.1	-	26.6	11.2	23.6	-	100.0
Rae Bareli	42.3	3.6	-	8.8	6.1	37.6	1.6	100.0
Sultanpur	7.2	4.7	-	-	-	81.1	-	100.0
Total	25.5	12.7	1.3	13.4	5.9	39.9	1.3	100.0



## CHAPTER V

### Agricultural Economy

#### V.1 Introduction

Agricultural economy of U.P. has undergone substantial changes particularly since mid-sixties. These changes are reflected in the technological changes leading to significant improvement in productivity and output of various crops. It is also a well known fact that the dynamism in the agricultural economy of the state has not been spatially uniform resulting in inter-regional differentials.

When we view the agricultural economy of our sample households of the project area, we notice that its present level is comparatively less developed as compared to that of the state as a whole. Some of these major features as revealed by our survey of the project area are discussed in this chapter.

#### V.2 Yield Per Acre of Major Crops

Per acre productivity of major food and non-food crops except oilseeds has been found to be comparatively low in the project area (Table V.1). Yield levels of paddy and wheat, the two main cereals, are only about three-fourth and two-third respectively of the state level yields of these crops. Highest yield of paddy was found at 1081 Kg. per acre in Etah district, whereas it was as low as 457 kg. per acre in Sultanpur district. Similarly



productivity of wheat has been found to be varying from 428 kg. per acre in Fatehpur district to 1088 kg. per acre in Mainpuri district.

Yield of pulses in the project area is even less than one-fourth of the state average. It is highest (535 kg. per acre) in Pratapgarh district and lowest (130 kg. per acre) in Sultanpur district.

The average yield of the two principal commercial crops of the project area i.e., sugarcane and potato has been found to be less than half of the state average. In case of sugarcane, Sultanpur shows highest yield of 12,232 kg. per acre while lowest yield is found in Pratapgarh district (529.6 kg. per acre). In case of potato yield varies from 648 kg. per acre in Sultanpur district to 7333 kg. per acre in Etah district.

However, we observe quite a different situation in case of oilseeds productivity, which is slightly higher in the project area than the state average. Its rate also varies from 216 kg. per acre in Rae Bareilly district to 650 kg. per acre in Azamgarh district.

Degraded quality of cultivated land coupled with lack of irrigation facilities are the two major constraints in enhancing crop productivity in the project area.

### V.3 Value of Output Per Acre

We find Rs.3394 as gross value and Rs.1978 as net value of agricultural produce per acre in the project area (Table V.2).

Cost per acre of net area sown has been found to be Rs.1416 which constitutes 41 per cent of the gross value of agricultural produce. The gross value per acre of net area sown has been found to be highest in Etah district, i.e. Rs.5672 and lowest in Sultanpur district, i.e. Rs.1921. Lowest net value is realised in Pratapgarh district i.e. Rs.984 while Etah district had highest net value of agricultural produce per acre of net area sown (Rs.390).

The average output-input ratio comes to 2.4, but it shows a large variation from 1.7 to 3.3. Differences in value productivity and output-input ratio seem to be related largely to the differences in average yields. In case of Etah the quality of soil was found to be better and farmers were specialising in vegetable cultivation. In case of Mainpuri, however, both higher yields and larger area under high value crops raised the value productivity inspite of poor quality of soil.

#### V.4 Input Structure

We have computed cost per acre by including all expenses on inputs, wages, rent, bullock labour, etc. whether purchased or supplied by the cultivator himself. Value of family labour has, however, not been taken into account.

Cost of various inputs used in agricultural operations has come to Rs.747 per acre of gross cropped area of the total sample households. It has also been found to be varying from Rs.505 in Sultanpur district to Rs.1047 in Etawah district (Table V.3).



The main items of expenditure are bullocks (Rs.213), fertiliser (Rs.131), irrigation (Rs.99), hired labour (Rs.93) and seeds (Rs.100). However, at the inter-district level, the input cost structure is not the same as what we observe at the aggregative level of the project area (Table V.4). In Rae Bareli and Fatehpur districts, the cost of hired labour per acre of gross cropped area has come out to be highest i.e., Rs.186 and Rs.101 respectively which constitutes 26 per cent and 17 per cent respectively of total input cost. Similarly the share of fertiliser cost is highest in Sultanpur, which is around 28 per cent of the total cost. In other districts fertiliser cost is second most important item in their total input cost, accounting for between 16 and 23 per cent respectively of their total input cost (Table V.4).

Hired labour accounts for 12.4 per cent of total cost. Share of seed and manure in cost comes to 13.4 and 6.8 per cent and that of hired machinery 5.9 per cent, while expenses on pesticides are nominal.

It was also found that only 25 per cent of seed requirements are purchased. Expenses on hired bullock labour are negligible. Manure is also supplied by the cultivators themselves. On the whole about 50 per cent of inputs are purchased and 50 per cent are provided by the farmers.

#### V.5 Marketing of Produce

Per farm values of output produced, output retained for home consumption and output sold are Rs.10,925, Rs.6,309 and Rs.4,616



respectively in the project area (Table V.5). Thus out of the total value of output produced around 58 per cent is consumed by the households themselves and rest 42 per cent is marketed. Thus per farm marketed surplus of agricultural produce is not substantial. The generation of marketed surplus in some of the sample districts like Sultanpur, Pratapgarh and Azamgarh is so poor that the households of these districts could market less than twenty per cent of the total value of output produced and used more than eighty per cent of it for domestic consumption. The range of variation in the proportion of the per farm value of output sold for home consumption has been found to be lowest i.e. 36 per cent in Rae Bareilly district and highest 85 per cent in Sultanpur district. Small size of holdings coupled with low yields has restricted the marketable surplus in the project area. Thus, our analysis reveals that farming in the project area is still largely subsistence oriented and the degree of monetization is not high.

Table V.1Average Yield of Major Crops on Sample Farms

(Kg./Acre)

Districts	Paddy	Jowar	Bajra	Maize	Pulses	Wheat	Barley	Gram	Oil Seeds	Sugar- cane	Potato
Allahabad	741	-	274	-	388	555	-	243	647	8808	1522
Azamgarh	829	-	-	-	227	913	-	252	650	8592	3052
Etah	1028	-	-	1100	-	865	-	209	-	11250	5160
Etawah	1081	483	484	644	475	959	662	348	563	-	7333
Fatehpur	602	429	-	-	331	428	500	325	-	7500	-
Mainpuri	968	563	417	402	354	1088	-	387	393	12000	1164
Pratapgarh	605	323	-	452	535	471	-	280	282	5296	1407
Rae Bareli	987	291	-	-	311	660	495	226	216	9259	6029
Sultanpur	457	-	-	-	130	546	-	416	384	12232	648
Total	801	370	437	567	539	685	593	291	322	9094	3626



Table V.2

Gross Value, Net Value and Cost Per Acre of  
Net Area Sown in the Sample Farms

(Rs.)

Districts	Gross Value	Net Value	Per Cost Acre*	Output-Input Ratio
Allahabad	2742	1390	1352	2.0
Azamgarh	2879	1650	1229	2.3
Etah	5672	3902	1770	3.2
Etawah	3229	1684	1545	2.1
Fatehpur	2910	1710	1200	2.4
Mainpuri	4806	3333	1473	3.3
Pratapgarh	2393	984	1409	1.7
Rae Bareli	3425	2004	1421	2.4
Sultanpur	1921	1060	861	2.2
Total	3394	1978	1416	2.4

\* Excludes family labour.



Table V.3

Input-Cost Per Acre of Gross Cropped Area on Sample Farms

(Rs.)

Districts	Hired Labour	Seed	Manure	Fertiliser	Pesticides	Hired Machinery	Bullock Labour	Irrigation Charges	Rent Land Revenue	Total Cost
Allahabad	41	97	49	138	17	59	299	84	8	792
Azamgarh	9	100	30	157	2	13	287	92	6	696
Etah	123	101	80	144	20	82	183	154	4	891
Etawah	50	143	19	124	-	-	625	86	-	1047
Fatehpur	101	74	77	50	2	69	91	130	-	593
Mainpuri	86	121	56	186	2	50	204	112	31	848
Pratapgarh	60	86	38	129	3	21	349	74	5	765
Rae Bareilly	186	107	45	135	17	35	102	76	7	710
Sultanpur	22	93	29	141	2	21	122	74	1	505
Total	93	100	51	131	9	44	213	99	7	747

Table V.4

Proportion of Different Input Cost in Total Cost on the  
Sample Farms

(Per cent)

Districts	Hired Labour	Seed	Manu- re	Ferti- liser	Pesti- cides	Hired Machi- nery	Bullock Labour	Irriga- tion Charges	Rent Land Reve- nue	Total Cost
Allahabad	5.1	12.2	6.1	17.5	2.2	7.5	37.8	10.5	1.1	100.0
Azamgarh	1.4	14.3	4.3	22.6	0.2	1.9	41.2	13.2	0.9	100.0
Etah	13.8	11.3	9.0	16.2	2.3	9.2	20.5	17.3	0.4	100.0
Etawah	4.7	13.7	1.8	11.9	-	-	59.7	8.2	-	100.0
Fatehpur	17.0	12.4	12.9	8.5	0.4	11.6	15.2	21.9	0.1	100.0
Mainpuri	10.0	14.3	6.6	21.9	0.2	5.9	24.1	13.2	3.6	100.0
Pratapgarh	7.8	11.2	5.0	16.8	0.4	2.8	45.6	9.7	0.7	100.0
Rae Bareli	26.2	15.2	6.3	19.1	2.3	4.9	14.4	10.6	1.0	100.0
Sultanpur	4.2	18.5	5.6	27.9	0.5	4.2	24.2	14.6	0.3	100.0
Total	12.4	13.4	6.8	17.6	1.2	5.9	28.6	13.2	0.9	100.0

Table V.5

Per Farm Value of Output, Home Consumption  
and Sale on the Sample Farms

(Rs.)

Districts	Output Produced	Output Retained for Home Consumption	Output Sold
Allahabad	10116 (100)	6870 (68)	3246 (32)
Azamgarh	6481 (100)	5239 (81)	1242 (19)
Etah	19654 (100)	10077 (51)	9577 (49)
Etawah	5507 (100)	3333 (61)	2174 (39)
Fatehpur	9966 (100)	5819 (58)	4147 (42)
Mainpuri	13886 (100)	7912 (57)	5974 (43)
Pratapgarh	7778 (100)	6368 (82)	1410 (18)
Rae Bareli	20544 (100)	7410 (36)	13134 (64)
Sultanpur	4417 (100)	3750 (85)	667 (15)
Total	10925 (100)	6309 (58)	4616 (42)

Note : Figures in parentheses denote percentages in total.



## CHAPTER VI

### Agro-Economic Practices and Farmer's Attitudes

#### VI.1 Introduction

In this chapter we have discussed important agro-economic practices like leaving fallow lands, adoption of new crops, use of modern inputs, etc. This is followed by a discussion of farmers willingness to purchase and sell irrigation water, their attitudes about leasing and their interaction with the block level functionaries.

#### VI.2 Fallow Land

The number of farmers leaving their cultivated land as fallow has been found to be quite low confined to only 5 per cent of the total respondents of the project area (Table VI.1). Such farmers were found mainly in the districts of Rae Bareilly and Pratapgarh. In general majority of these farmers leave their land as fallow for 2-3 years duration (Table VI.1).

#### VI.3 Adoption of New Crops

The cropping pattern in the project area does not seem to have undergone any change in recent years as majority of the sample farmers did not report adoption of any new crop in recent years. We find that only 11 farmers have adopted new crops out of which 6 farmers adopted wheat cultivation and one each paddy,

sugarcane, arhar, moong and potato. Most of these farmers belong to the districts of Allahabad followed by farmers of Pratapgarh and Rae Bareli districts (Table VI.2).

#### VI.4 Adoption of HYV Seeds

The distribution of the sample farmers according to the varieties of seeds used indicates that around 54 per cent of them used local as well as HYV seeds, 32 per cent used only local seeds and remaining 14 per cent adopted HYV seeds exclusively (Table VI.3). The HYV seeds using farmers constituted 45 per cent of the total farmers of Etawah district, 25 per cent in Allahabad district and 20 per cent in Sultanpur district. These districts are above the average in adoption level of HYV in the total sample area. In the remaining districts the use of HYV seeds by the farmers is quite low. Therefore it is quite evident that there still exists a good scope for increasing the adoption of HYV seeds by the farmers of the project area.

#### VI.5 Use of Modern Inputs

The distribution of sample farmers of the project area according to the use of modern inputs and farming practices shows that on an average 93 per cent of the total farmers use chemical fertilisers, 27 per cent use green manure, 33 per cent use compost, 83 per cent use cowdung, 28 per cent pesticides, 1 per cent pyrite and 11 per cent adopt line sowing (Table VI.4). The use of chemical fertiliser has become widespread as percentages of farmers using it vary between 9 to 100 per cent in Etawah and



Allahabad district. The green manure which is one of the major inputs in sodic land reclamation is being used by a small number of farmers (about 27 per cent). In Rae Bareilly, however, 65 per cent farmers used green manuring. Similarly pyrite which is the main input for reclamation of sodic land is not being used at all by the farmers of the selected districts except by two farmers of the Rae Bareilly district. Line sowing is also not much popular in the sample districts except to some extent in Allahabad, Etah, Pratapgarh and Rae Bareilly. Thus, keeping in view the general degraded quality of cultivated land and large tract of sodic land in the project area, it is essential that the farmers be educated to use modern inputs and methods of cultivation particularly pyrite and green manure.

Per acre consumption of manures was found to be 596 kg., though the figure varied markedly from 197 kg. to 1,111 kg. (Table VI.5). Consumption level of chemical fertiliser has reached the encouraging figure of 95 kg. per acre of net cropped area on the sample farms. Again there were inter-district variations from 42 kg. in Fatehpur to 161 kg. per acre in Mainpuri (Table VI.5).

#### VI.6 Sale and Purchase of Irrigation Water

The willingness of farmers to sell, purchase irrigation water is conditioned by the ownership of private water sources and the inadequacy of irrigation water. From both these view points we have observed that private irrigation sources are quite few with the farmers and there is a general inadequacy of water for irrigation purposes in the project area. This observation gets



further support from Table VI.6 showing willingness of farmers to sell and purchase irrigation water. Only 21 per cent of the total sample farmers are willing to sell irrigation water, whereas more than 78 per cent are willing to purchase irrigation water. The eagerness of the farmers to purchase irrigation water can be gauged from the fact that the proportion of farmers who are willing to buy irrigation water varies from 55 in Etah district to 100 per cent in Allahabad and Etawah district. Hence it can be concluded that there is general unfulfilled demand for irrigation water in the project area.

#### VI.7 Leasing-Out and Leasing-in Land

The leasing-out of cultivated land is not much prevalent in the project area as only 17 farmers (9 per cent) reported to have leased-out their land. Out of these 17 farmers 8 farmers are from Sultanpur district alone (Table VI.7). None of the farmers of Azamgarh, Etawah and Rae Bareilly in our sample lease out land at all. Most of the farmers who leased-out are not thinking of withdrawing their leased-out land (Table VI.7).

The practice of leasing in of land is also not common in the project area as only 19 per cent of the total farmers reported to have leased in land (Table VI.8). In some districts like Sultanpur, Mainpuri, Fatehpur, Pratapgarh and Etah, the proportion of leased-in farmers is relatively higher. The sample farmers of Etawah district did not lease in at all. The majority of such farmers who have leased in land did not express any fear of termination of land lease agreement (Table VI.8).

#### VI.8 Contact with Block Officials

The development blocks are the nodal agencies for implementing various agricultural and rural development programmes. As Table VI.9 reveals out of the total farmers, 35 per cent reported that block officials never visited them, 12 per cent indicated that block officials visited them in one year, 26 per cent reported visits in six months and only 27 per cent in the last one month. In the districts of Mainpuri, Etawah, Etah, Rae Bareli, Pratapgarh, Sultanpur and Azamgarh, 35 per cent to 55 per cent farmers expressed the view that the block officials never visited them. The frequency of contact was relatively more in Mainpuri, Allahabad, Fatehpur and Azamgarh districts. Thus in general the delivery system of agricultural development needs to be strengthened in the project area.



Table VI.1

Distribution of Farmers Reporting Fallow Land

(Nos.)

Districts	Farmers Leaving Fallow Land	Duration of Leaving Fallow Land			No. of Respondents
		1 Year	2 Year	3 Year	
Allahabad	-	-	-	-	20
Azamgarh	-	-	-	-	20
Etah	-	-	-	-	20
Etawah	-	-	-	-	20
Fatehpur	1 ( 5.0)	-	1 ( 5.0)	-	20
Mainpuri	-	-	-	-	20
Pratapgarh	3 (15.0)	1 ( 5.0)	2 (10.0)	-	20
Rae Bareli	4 (20.0)	-	2 (10.0)	2 (10.0)	20
Sultanpur	1 ( 5.0)	1 ( 5.0)	-	-	20
Total	9 ( 5.0)	2 ( 1.11)	5 ( 2.78)	2 ( 1.11)	100

Note : Figures in parentheses denote percentages to total respondents.



Table VI.2

Distribution of Farmers According to the Adoption  
of New Crops in Recent Years

(Nos.)

Districts	Name of Crops						Total
	Wheat	Paddy	Sugarcane	Arhar	Moong	Potato	
Allahabad	3 (15.0)	1 ( 5.0)	1 ( 5.0)	1 ( 5.0)	1 ( 5.0)	1 ( 5.0)	8 (40.0)
Azangarh	-	-	-	-	-	-	-
Etah	-	-	-	-	-	-	-
Etawah	-	-	-	-	-	-	-
Fatehpur	-	-	-	-	-	-	-
Mainpuri	-	-	-	-	-	-	-
Pratapgarh	2 (10.0)	-	-	-	-	-	2 (10.0)
Rae Bareli	1 ( 5.0)	-	-	-	-	-	1 ( 5.0)
Sultanpur	-	-	-	-	-	-	-
Total	6 (3.0)	1 (1.0)	1 (1.0)	1 (1.0)	1 (1.0)	1 (1.0)	11 (6.1)

Note : Figures in parentheses denote percentages to total respondents.

Table VI.3

Distribution of Farmers According to Type of Seed Used

(Nos.)

Districts	HYV	Local	Both	Total
Allahabad	5 (25.00)	8 (40.00)	7 (35.00)	20 (100.00)
Azamgarh	1 (5.00)	9 (45.00)	10 (50.00)	20 (100.00)
Etah	1 (5.00)	2 (10.00)	17 (85.00)	20 (100.00)
Etawah	9 (45.00)	4 (20.00)	11 (55.00)	20 (100.00)
Fatehpur	1 (5.00)	8 (40.00)	11 (55.00)	20 (100.00)
Mainpuri	-	5 (25.00)	15 (75.00)	20 (100.00)
Pratapgarh	2 (10.00)	7 (35.00)	11 (55.00)	20 (100.00)
Rae Bareli	2 (10.00)	4 (20.00)	14 (70.00)	20 (100.00)
Sultanpur	4 (20.00)	10 (50.00)	6 (30.00)	20 (100.00)
Total	25 (13.89)	57 (31.67)	98 (54.44)	180 (100.00)

Note : Figures in parentheses denote percentages to total respondents.



**Table VI.4**  
**Distribution of Farmers According to Use of Modern**  
**Inputs and Farming Practices**

(Nos.)

Districts	Chemical Fertiliser	Green Manure	Compost	Cow Dung	Pesticides	Pyrite	Line Sowing	Total No. of Respondents
Allahabad	20 (100.0)	7 (35.00)	3 (15.00)	20 (100.0)	7 (35.00)	-	9 (45.00)	20
Azamgarh	19 (95.00)	1 (5.00)	10 (50.00)	10 (50.00)	7 (35.00)	-	-	20
Etah	16 (80.00)	2 (10.00)	7 (35.00)	16 (80.00)	1 (5.00)	-	1 (5.00)	20
Etawah	20 (100.0)	1 (5.00)	3 (15.00)	17 (85.00)	2 (10.00)	-	-	20
Fatehpur	17 (85.00)	5 (25.00)	11 (55.00)	18 (90.00)	1 (5.00)	-	-	20
Mainpuri	19 (95.00)	4 (20.00)	5 (25.00)	14 (70.00)	2 (10.00)	-	-	20
Pratapgarh	19 (95.00)	8 (40.00)	4 (20.00)	19 (95.00)	7 (35.00)	-	6 (30.00)	20
Rae Bareilly	19 (95.00)	13 (65.00)	8 (40.00)	20 (100.0)	11 (55.00)	2 (10.00)	3 (15.00)	20
Sultanpur	17 (85.00)	2 (10.00)	5 (25.00)	12 (60.00)	10 (50.00)	-	-	20
Total	168 (93.33)	49 (27.22)	60 (33.33)	150 (83.33)	50 (27.77)	2 (1.11)	19 (10.56)	180

Note : Figures in parentheses denote percentages to total respondents.



Table VI.5

Use of Manures and Fertilisers in the Sample Farms

(Kg. Per Acre)

Districts	Manure	Fertiliser
Allahabad	493	91
Azamgarh	475	104
Etah	197	86
Etawah	385	85
Fatehpur	983	42
Mainpuri	1111	161
Pratapgarh	588	102
Rae Bareli	658	92
Sultanpur	270	110
Total	596	95

Table VI.6

Distribution of Farmers According to Willingness to  
Sell and Purchase Irrigation Water

Districts	Willing to Sell Irriga- tion Water	Willing to Purchase Irri- gation Water	Total Respondents
Allahabad	2 (10.00)	20 (100.0)	20
Azamgarh	6 (30.00)	14 (70.00)	20
Etah	9 (45.00)	11 (55.00)	20
Etawah	-	20 (100.0)	20
Fatehpur	2 (10.00)	14 (70.00)	20
Mainpuri	4 (20.00)	12 (60.00)	20
Pratapgarh	7 (35.00)	15 (75.00)	20
Rae Bareli	5 (25.00)	16 (80.00)	20
Sultanpur	2 (10.00)	19 (95.00)	20
Total	37 (20.56)	141 (78.33)	180

Note : Figures in parentheses denote percentages to total respondents.

Table VI.7

Distribution of Farmers Reporting Leasing-Out  
of Their Land

Districts	Proposing to Withdraw Lease	Not Proposing to Withdraw Lease	Total Farmers Reported Leased
Allahabad	-	1 ( 5.00)	1 ( 5.00)
Azamgarh	-	-	-
Etah	-	1 ( 5.00)	1 ( 5.00)
Etawah	-	-	-
Fatehpur	1 ( 5.00)	2 (10.00)	3 (15.00)
Mainpuri	2 (10.00)	-	2 (10.00)
Pratapgarh	-	2 (10.00)	2 (10.00)
Rae Bareli	-	-	-
Sultanpur	-	8 (40.00)	8 (40.00)
Total	3 ( 2.00)	14 ( 8.00)	17 ( 9.00)

Note : Figures in parentheses denote percentages to total respondents.



Table VI.8

Distribution of Farmers About the Opinion About Lease Agreement

Districts	Fearing Termination of Lease	Not Fearing Termination	Total Reporting Leasing in Land	Total Respondents
Allahabad	— ( 5.00)	1 ( 5.00)	1 ( 5.00)	20
Azamgarh	2 (10.00)	—	2 (10.00)	20
Etah	1 ( 5.00)	3 (15.00)	4 (20.00)	20
Etawah	—	—	—	20
Fatehpur	1 ( 5.00)	4 (20.00)	5 (25.00)	20
Mainpuri	4 (20.00)	4 (20.00)	8 (40.00)	20
Pratapgarh	4 (20.00)	—	4 (20.00)	20
Rae Bareli	1 ( 5.00)	—	1 ( 5.00)	20
Sultanpur	1 ( 5.00)	8 (40.00)	9 (45.00)	20
Total	14 ( 7.78)	20 (11.11)	34 (18.89)	180

Note : Figures in parentheses denote percentages to total respondents.

Table VI.9

Distribution of Farmers Reporting Visit  
of Block Official

Districts	No. of Respondents Reporting Visit During Last				
	One Month	Six Month	One Year	Never	Total
Allahabad	9 (45.00)	6 (30.00)	4 (20.00)	1 ( 5.00)	20 (100.00)
Azamgarh	6 (30.00)	6 (30.00)	1 ( 5.00)	7 (35.00)	20 (100.00)
Etah	5 (25.00)	5 (25.00)	1 ( 5.00)	9 (45.00)	20 (100.00)
Etawah	5 (25.00)	4 (20.00)	2 (10.00)	9 (45.00)	20 (100.00)
Fatehpur	7 (35.00)	7 (35.00)	3 (15.00)	3 (15.00)	20 (100.00)
Mainpuri	9 (45.00)	-	-	11 (55.00)	20 (100.00)
Pratapgarh	1 ( 5.00)	5 (25.00)	6 (30.00)	8 (40.00)	20 (100.00)
Rae Bareli	3 (15.00)	7 (35.00)	2 (10.00)	8 (40.00)	20 (100.00)
Sultanpur	4 (20.00)	7 (35.00)	2 (10.00)	7 (35.00)	20 (100.00)
Total	49 (27.00)	47 (26.00)	21 (12.00)	63 (35.00)	180 (100.00)

Note : Figures in parentheses denote percentages to total respondents.



## CHAPTER VII

### Household Assets, Income and Indebtedness

#### VII.1 Introduction

Having presented the socio-economic characteristics of the sample households and different aspects of the agricultural economy in the project area in earlier chapters, we propose to discuss the overall economic condition of the households in this chapter. The discussion covers the pattern of ownership of livestock and agricultural implements and machinery, the level of total and per capita household income, different sources of household income and the extent of indebtedness by source and purpose.

#### VII.2 Livestock Ownership

On the whole one household owns 4.7 livestock in the project area consisting of 1.6 draft animals, 1.5 milch animals, 0.8 youngstock and 0.8 sheep and goats (Table VII.1). The number of livestock per household was relatively larger in the eastern districts, the figure ranging from 2.7 to 8.0.

Looking at the type of livestock ownership we find that on an average each household owns 1.6 draft animals, mainly bullocks. The number of milch animals - both cows and buffaloes - also comes to around 1.5 per household the figure varying from 0.9 in Etah and Mainpuri to 2.8 in Allahabad. Ownership of goats and sheep is less common, respondents of Allahabad, Azamgarh, Etawan and



Sultanpur reporting no ownership of these animals. Households in Mainpuri and Pratapgarh district reported ownership of sheep and goats in larger number.

It may be added that the livestock in the study area is generally of non-descript local variety with very low yield levels. Draft animals, even though uneconomical, have to be maintained of necessity for ploughing purposes. Milch animals are kept as a supplementary economic activity both for self-consumption and sale.

The availability of feed and fodder for livestock is affected to a great extent by the availability of net area sown. Hence we have worked out in Table VII.2 the number of livestock per hectare of net area sown. The number of draft and milch animals per hectare was worked out at 0.5 each for the project area as a whole. It may be noted that districts Azamgarh, Etawah and Sultanpur had draft animal per acre above the average and Allahabad, Azamgarh and Pratapgarh had milch animals per acre above the average.

### VII.3 Ownership of Agricultural Implements and Machinery

Agricultural implements and machinery are a crucial requirement for cultivation. Table VII.3 gives the distribution of farmers reporting agricultural implements across the districts. We find that of the total reporting farmers 63 per cent owned wooden ploughs, 41 per cent iron ploughs, 41 per cent chaff cutter, 23 per cent bullock carts, and 19 per cent levellers.

Thus basic agricultural implements needed for cultivation are by and large owned by all the sample farmers. But most of the implements owned are of traditional type. In view of the easy availability of labour, small size of holding and poor economic condition the ownership of costly and non-traditional machinery is limited. Thus only 8 per cent own tubewell, while 21 per cent own pumpsets, and 18 per cent own threshers.

#### VII.4 Household Income

Table VII.4 shows details of per household and per capita income by source. On an average, per household income comes to Rs.14191 per annum. The share of income from agriculture comes to 45.7 per cent, animal husbandry 26.9 per cent, services 10.8, and income from non-farm labour 6.3 per cent. There are some variations across the districts in terms of contribution of different components to income generation. For instance, in Azamgarh, Etah, Fatehpur, Mainpuri and Rae Bareilly, contribution of agriculture was relatively more. However, in districts of Allahabad, Etawah, Pratapgarh and Sultanpur, the major source of household income is animal husbandry. But in Etah, Fatehpur and Mainpuri relative contribution of this sector is low.

Large differentials in household incomes are also to be noted. It is highest in Rae Bareilly (Rs.24630) while lowest in Sultanpur (Rs.6626). The higher per household income of Rae Bareilly is mainly due to the inclusion of two large size land holders in the sample and the involvement of family members in



other remunerative activities like business, trade and transport. Per capita income worked out to Rs.2129 per annum on an average. It was highest in Rae Bareli (Rs.3570) and lowest in Sultanpur (Rs.1060). In district Etah, Mainpuri and Rae Bareli, per capita income was above the average of the project area.

Table VII.5 shows distribution of households according to annual income classes. We find that largest number of households (21.1 per cent) are in the income class of less than Rs.5000. 20 per cent of households are in the income class between Rs.5000 and Rs.7500. On the other extreme 18.3 per cent households had an annual income of Rs.20,000 and above. The concentration of households under lower income groups shows extreme poverty in the project area. Thus, if we take Rs.10,000 annual household income as the poverty line 53.3 per cent of households will fall in this category.

The distribution of households according to income levels shows some variation across districts. The proportion of households below poverty line (Rs.10,000) was relatively low in district Etawah and Mainpuri (25 per cent); moderately high in district Allahabad, Fatehpur, Pratapgarh and Rae Bareli (between 40 and 60 per cent); but very high in district Azamgarh, Etawah and Sultanpur (70 to 90 per cent). On the other extreme, proportion of households with above average income (over Rs.15,000) was relatively higher in Etah, Mainpuri and Rae Bareli.

Table VII.6 depicts the distribution of households according to level of per capita annual income. If we take per capita



income of Rs.1500 as the poverty line, about 46 per cent households are below the poverty line. About 27 per cent households were in the middle level of per capita income (between Rs.1500 and Rs.2500), while another 27 per cent households were relatively well off with per capita income above Rs.2500. Differences in per capita income levels across the districts are also to be observed. The proportion of very poor households (with incomes below Rs.1000 per capita) was found relatively larger in Allahabad (45 per cent), Pratappgarh (25 per cent), Rae Bareilly (40 per cent) and Sultanpur (50 per cent) districts, all of which belong to East U.P. On the other hand, in Etah and Mainpuri districts the proportion of better off households was markedly higher.

#### VII.5 Indebtedness

We now turn to the discussion of the levels, sources and purposes of indebtedness among the sample households in the project area. Per household indebtedness comes to Rs.3318, that is, about 24 per cent of the average household income. However the amount of indebtedness varies from Rs.380 in Azamgarh to Rs.6633 in Rae Bareilly (Table VII.7). The amount of loans taken during the current year was Rs.2033, indicating that bulk of the debt is of short period duration. The amount of loans per indebted family is quite high, i.e., Rs.8913. It varies from Rs.2533 to Rs.23,267 (Table VII.7).

It was found that only 37 per cent of the sample households had taken loans for one purpose or the other. Most of the

families (85 per cent) had borrowed for productive purposes. Basically loans were taken for agricultural purposes (in 68 per cent cases) or for purchase of livestock (in 19 per cent cases) as shown in Table VII.8. Only 3 per cent households reported having taken consumption loans, while 12 per cent had taken loans for religious and social ceremonies.

Nearly same pattern emerges when we look at the distribution of indebtedness by purpose shown in Table VII.9. About 97 per cent of loans has been incurred for productive purposes - 78 per cent for agricultural purposes and 15 per cent for purchase of livestock.

It is encouraging to find that villagers are approaching institutional agencies for borrowing in larger numbers. As shown in Table VII.10 over 70 per cent of indebted households borrowed from institutional sources - 33 per cent from cooperative societies, 27.6 per cent from Gramin Banks (Regional Rural Banks) and 16 per cent from Commercial Banks. Only 19 per cent households approached moneylenders for borrowing.

When one looks at the distribution of indebtedness by source, shown in Table VII.11, one finds that about 90 per cent of loans have been taken from institutional sources. 64.6 per cent of loans were taken from Commercial Banks, though only 16 per cent of borrowers reported taking loans from this source. This implies that the average amount of loans taken from commercial banks is much larger as compared to other sources. Gramin Banks supplied



14 per cent of credit and cooperatives about 10 per cent. The share of moneylenders in total loans was found to be only 7.7 per cent.

To sum up the findings of this chapter, the general economic condition of the cultivating households in the project area was found to be rather poor, with a per capita income of about Rs.2400 per year. Low level of income was found accompanied with a high degree of inequality. Nearly half of the households are living below poverty line. Due to small size of holdings and low productivity agriculture contributed only 45 per cent of household income and the households were forced to supplement their income from diverse sources. Animal husbandry was found to be the main secondary economic activity contributing about 27 per cent of livestock, but the quality of the livestock was found to be very poor. It was also found that while every households has a sufficient number of traditional agricultural implements needed to carry on cultivation, degree of mechanisation and ownership of tractors, tubewells and pumpsets was rather low. The study further revealed that the facilities of institutional credit has spread well over the rural areas. A little less than 40 per cent of households had incurred debt, but an overwhelming part of debt was for productive purpose and was financed by institutional sources.



Table VII.1

Number of Livestock Owned Per Household

Districts	Bul- lock	Buffa- lo	Total Draft Animal	Cow	Milch Bufa- lo	Total Milch Animal	Young- stock	Sheep	Goat	Total
Allahabad	0.3	0.3	0.6	2.0	0.8	2.8	1.8	-	-	5.2
Azamgarh	1.9	-	1.9	0.8	0.5	1.3	1.3	-	-	4.5
Etah	0.7	0.4	1.1	0.2	1.2	1.4	0.7	-	1.4	4.6
Etawah	1.7	0.3	2.0	0.8	0.1	0.9	-	-	-	2.9
Fatehpur	0.9	0.4	1.3	0.8	0.5	1.3	0.3	0.3	0.2	3.4
Mainpuri	0.9	0.5	1.4	0.2	0.7	0.9	1.1	1.1	0.6	5.1
Pratapgarh	1.7	-	1.7	0.8	1.2	2.0	-	3.6	0.7	8.0
Rae Bareli	1.4	0.2	1.6	1.2	0.6	1.8	1.9	-	0.3	5.6
Sultanpur	1.9	-	1.9	0.3	0.5	0.8	-	-	-	2.7
Total	1.4	0.2	1.6	0.8	0.7	1.5	0.8	0.5	0.3	4.7

Table VII.2

Livestock Per Hectare of Net Area Sown

(No.)

Districts	Total Draft Animals	Total Milch Animals	Total Animals
Allahabad	0.4	0.7	1.1
Azamgarh	0.8	0.6	1.4
Etah	0.3	0.4	0.7
Etawah	1.1	0.5	1.6
Fatehpur	0.4	0.4	0.8
Mainpuri	0.5	0.3	0.8
Pratapgarh	0.5	0.6	1.1
Rae Bareli	0.3	0.4	0.7
Sultanpur	0.8	0.4	1.2
Total	0.5	0.5	1.0

Table VII.3

**Number of Farmers Reporting Possession of Different Agricultural Implements and Machinery**

Districts	Wooden Plough	Iron Plough	Tractor	Three-sher	Harrow	Culti-vator	Leve-ller	Trolley	Well	Persian Wheel	Tube-well set	Pump-set	Chaff Cutter	Cane Cru-cher	Bullock Cart
Allahabad	19 (95)	4 (20)	1 (5)	3 (15)	-	1 (5)	7 (35)	1 (5)	10 (50)	-	2 (10)	2 (10)	18 (90)	7 (35)	-
Azamgarh	20 (100)	2 (10)	-	6 (30)	-	-	-	-	-	-	5 (25)	1 (5)	9 (45)	6 (30)	1 (5)
Etah	15 (75)	13 (65)	-	-	-	1 (5)	4 (20)	1 (5)	3 (15)	-	2 (10)	7 (35)	3 (15)	-	7 (35)
Etawah	20 (100)	3 (15)	-	1 (5)	-	-	-	-	-	-	-	-	-	-	12 (60)
Fatehpur	13 (65)	16 (80)	5 (25)	5 (25)	4 (20)	3 (15)	9 (45)	3 (15)	4 (20)	-	5 (25)	1 (5)	2 (10)	-	5 (25)
Mainpuri	12 (60)	15 (75)	1 (5)	3 (15)	-	7 (35)	1 (5)	2 (10)	1 (5)	2 (10)	2 (10)	14 (70)	-	2 (10)	-
Pratapgarh	18 (90)	9 (45)	2 (10)	7 (35)	-	2 (10)	6 (30)	2 (10)	3 (15)	-	4 (20)	10 (50)	15 (75)	5 (25)	3 (15)
Rae Bareilly	13 (65)	10 (50)	5 (25)	7 (35)	1 (5)	5 (25)	7 (35)	4 (20)	10 (50)	1 (5)	5 (25)	2 (10)	18 (90)	-	7 (35)
Sultanpur	20 (100)	1 (5)	1 (5)	-	-	1 (5)	-	-	2 (10)	-	8 (40)	-	9 (45)	-	6 (30)
<b>Total</b>	<b>150 (83)</b>	<b>73 (41)</b>	<b>15 (8)</b>	<b>32 (18)</b>	<b>5 (3)</b>	<b>20 (11)</b>	<b>34 (19)</b>	<b>13 (7)</b>	<b>33 (18)</b>	<b>3 (2)</b>	<b>33 (18)</b>	<b>37 (21)</b>	<b>74 (41)</b>	<b>20 (11)</b>	<b>41 (23)</b>

Note : Figures in brackets show per cent to total sample households.



Table VII.4

## Per Household Annual Income by Source

Districts	Agriculture	Animal Husbandry	Hiring Out of Imple-ments	Leasing Out of Land	Grooves and Orchards	Farm Labour	Non-Farm Labour	Business	Service	Remittances	Other Sources	Per Household Income	Per Capita Income
Allahabad	5127 (34.3)	6633 (44.4)	123 (0.8)	-	735 (4.9)	240 (1.6)	195 (1.3)	90 (0.6)	1320 (8.9)	420 (2.8)	50 (0.4)	14933 (100.0)	1747
Azamgarh	3714 (50.4)	2164 (29.4)	188 (2.6)	-	-	79 (1.2)	592 (8.0)	-	630 (8.6)	-	-	7367 (100.0)	1261
Etah	13521 (59.8)	3884 (17.2)	1249 (5.5)	-	-	645 (2.9)	2130 (9.4)	300 (1.3)	300 (1.3)	570 (2.6)	-	22599 (100.0)	2993
Etawah	2863 (33.5)	3095 (36.3)	-	-	-	316 (3.7)	211 (2.5)	-	2034 (24.0)	-	-	8544 (100.0)	1326
Fatehpur	5855 (43.7)	1823 (13.6)	792 (6.0)	25 (0.2)	60 (0.4)	333 (2.5)	2718 (20.3)	350 (2.6)	1245 (9.3)	-	180 (1.3)	13387 (100.0)	1983
Mainpuri	9629 (50.6)	1322 (6.9)	861 (4.5)	367 (1.9)	-	113 (0.6)	930 (4.9)	450 (2.4)	5140 (27.0)	-	225 (1.2)	19037 (100.0)	2779
Pratapgarh	3199 (30.1)	5946 (59.9)	188 (1.8)	-	-	79 (0.7)	592 (5.6)	-	630 (6.0)	-	-	10634 (100.0)	1743
Ras Baroli	12016 (48.5)	6696 (27.2)	976 (4.0)	-	450 (1.8)	425 (1.7)	45 (0.2)	1000 (4.1)	2400 (9.7)	-	420 (2.5)	24630 (100.0)	3570
Sultanpur	2426 (36.8)	2565 (43.2)	-	-	-	192 (2.9)	637 (9.6)	81 (1.2)	63 (1.0)	350 (5.3)	-	6626 (100.0)	1060
Total	6405 (45.7)	3825 (26.9)	484 (3.4)	44 (0.3)	138 (1.0)	269 (2.0)	894 (6.3)	252 (1.8)	1532 (10.8)	149 (1.0)	119 (0.8)	14191 (100.0)	2119

Note : Figures in brackets show per cent to total sample households.

Table VII.5

Distribution of Sample Households According to Level of Annual Household Income

Districts	Upto Rs.5000	Rs.5000 to Rs.7500	Rs.7500 to Rs.10000	Rs.10000 to Rs.12500	Rs.12500 to Rs.15000	Rs.15000 to Rs.20000	Rs.20000 and Above	Total
Allahabad	8 (40.00)	2 (10.00)	-	2 (10.00)	2 (10.00)	2 (10.00)	4 (20.00)	20 (100.00)
Azamgarh	2 (10.00)	8 (40.00)	4 (20.00)	4 (20.00)	-	1 (5.00)	1 (5.00)	20 (100.00)
Etah	-	3 (15.00)	2 (10.00)	2 (10.00)	3 (15.00)	3 (15.00)	7 (35.00)	20 (100.00)
Etawah	2 (10.00)	10 (50.00)	2 (10.00)	4 (20.00)	1 (5.00)	-	1 (5.00)	20 (100.00)
Fatehpur	3 (15.00)	1 (5.00)	4 (20.00)	5 (25.00)	2 (10.00)	2 (10.00)	3 (15.00)	20 (100.00)
Mainpuri	1 (5.00)	2 (10.00)	2 (10.00)	1 (5.00)	3 (15.00)	4 (20.00)	7 (35.00)	20 (100.00)
Pratapgarh	7 (35.00)	3 (15.00)	2 (10.00)	2 (10.00)	-	2 (10.00)	4 (20.00)	20 (100.00)
Rae Bareilly	8 (40.00)	1 (5.00)	1 (5.00)	-	-	4 (20.00)	6 (30.00)	20 (100.00)
Sultanpur	7 (35.00)	6 (30.00)	5 (25.00)	1 (5.00)	1 (5.00)	-	-	20 (100.00)
Total	38 (21.10)	36 (20.00)	22 (12.20)	21 (11.70)	12 (6.70)	18 (10.00)	33 (16.30)	180 (100.00)

Note : Figures in brackets show per cent to total households.



Table VII.6

## Distribution of Sample Households According to Level of Annual Per Capita Income

Districts	Upto Rs.500	Rs.500 to Rs.750	Rs.750 to Rs.1000	Rs.1000 to Rs.1250	Rs.1250 to Rs.1500	Rs.1500 to Rs.2000	Rs.2000 to Rs.2500	Rs.2500 to Rs.3000	Rs.3000 and Above	Total
Allahabad	2 (10.00)	4 (20.00)	3 (15.00)	3 (15.00)	-	1 (5.00)	2 (10.00)	3 (15.00)	2 (10.00)	20 (100.00)
Azamgarh	-	2 (10.00)	-	1 (5.00)	5 (40.00)	5 (20.00)	1 (5.00)	3 (15.00)	-	20 (100.00)
Etah	-	-	2 (10.00)	-	1 (5.00)	3 (15.00)	1 (5.00)	10 (50.00)	3 (15.00)	20 (100.00)
Etawah	-	-	2 (10.00)	5 (25.00)	6 (30.00)	2 (10.00)	4 (20.00)	1 (5.00)	-	20 (100.00)
Fatehpur	-	1 (5.00)	2 (10.00)	2 (10.00)	2 (10.00)	8 (40.00)	1 (5.00)	4 (20.00)	-	20 (100.00)
Mainpuri	-	-	1 (5.00)	1 (5.00)	1 (5.00)	1 (5.00)	5 (25.00)	10 (50.00)	1 (5.00)	20 (100.00)
Pratapgarh	2 (10.00)	2 (10.00)	1 (5.00)	1 (5.00)	4 (20.00)	1 (5.00)	4 (20.00)	4 (20.00)	1 (5.00)	20 (100.00)
Rae Bareilly	1 (5.00)	5 (25.00)	1 (5.00)	1 (5.00)	-	2 (10.00)	3 (15.00)	4 (20.00)	3 (15.00)	20 (100.00)
Sultanpur	2 (10.00)	5 (25.00)	3 (15.00)	3 (15.00)	3 (15.00)	1 (5.00)	3 (15.00)	-	-	20 (100.00)
Total	7 (3.9)	19 (10.6)	13 (6.3)	17 (9.4)	25 (13.9)	24 (13.3)	24 (13.3)	39 (21.7)	10 (5.6)	180 (100.00)

Note : Figures in brackets show per cent to total households.



Table VII.7

Per Household Indebtedness Among Sample Household

(Rs.)

Districts	Per Household Total Out- standing Loan	Per Household Loan Taken this Year	Indebtedness Per Indebted Household
Allahabad	6455	955	24517
Azamgarh	380	40	2533
Etah	650	250	6500
Etawah	1950	-	4333
Fatehpur	3490	3450	23267
Mainpuri	5400	5400	12000
Pratapgarh	2569	2169	3211
Rae Bareilly	6633	6033	12059
Sultanpur	2333	-	5831
Total	5318	2033	8913

Table VII.8

Distribution of Sample Households According to Indebtedness  
by Purpose

Districts	Agricultural Purposes	House-Cons-truction	Live-stock	Commerce	Consum-ption	Religious and Social Ceremonies	Total No. of Households Reporting Indebtedness	Indebted Households As Per cent of Total
Allahabad	3 (50.0)	-	2 (33.3)	1 (16.7)	-	1 (16.7)	6 (100.0)	30
Azamgarh	3 (100.0)	-	-	-	-	-	3 (100.0)	15
Etah	-	-	2 (100.0)	-	-	-	2 (100.0)	10
Etawah	7 (77.8)	-	2 (22.2)	-	-	-	9 (100.0)	45
Fatehpur	2 (66.7)	-	1 (33.3)	-	-	-	3 (100.0)	15
Mainpuri	6 (66.7)	-	3 (33.3)	-	-	-	9 (100.0)	45
Pratapgarh	9 (56.3)	-	1 (6.3)	-	-	6 (37.4)	16 (100.0)	80
Rae Bareli	11 (100.0)	2 (18.2)	2 (18.2)	-	-	-	15 (100.0)	55
Sultanpur	3 (37.5)	2 (25.0)	-	-	2 (25.0)	1 (12.5)	8 (100.0)	40
Total	44 (67.7)	4 (6.0)	13 (19.4)	1 (1.5)	2 (3.0)	8 (11.9)	67 (100.0)	37

Note : 1. Figures in brackets show per cent to total number of household reporting indebtedness.

2. Some households have taken loans for more than one purpose.  
Hence percentages do not add to 100.



Table VII.9

## Per Household Indebtedness by Purpose

(In Rs.)

Districts	Agricultural Purposes	House-Construction	Live-stock	Commerce	Consumption	Religious and Social Ceremonies	Total Indebtedness
Allahabad	19183 (89.2)	-	1333 (6.2)	833 (3.9)	-	167 (0.7)	21517 (100.0)
Azamgarh	2533 (100.0)	-	-	-	-	-	2533 (100.0)
Etah	-	-	6500 (100.0)	-	-	-	6500 (100.0)
Etawah	3722 (85.9)	-	611 (14.1)	-	-	-	4333 (100.0)
Fatehpur	23000 (98.9)	-	267 (1.1)	-	-	-	23267 (100.0)
Mainpuri	6889 (57.4)	-	5111 (42.6)	-	-	-	12000 (100.0)
Pratapgarh	1599 (49.8)	-	563 (17.5)	-	-	1048 (32.7)	3214 (100.0)
Rae Bareilly	10286 (85.3)	1091 (9.1)	682 (5.6)	-	-	-	12059 (100.0)
Sultanpur	5150 (88.3)	519 (8.9)	-	-	125 (2.1)	38 (0.7)	5931 (100.0)
Total	6972 (78.2)	241 (2.7)	1340 (15.0)	75 (0.8)	15 (0.2)	270 (3.1)	8913 (100.0)

Note : 1. Indebtedness has been calculated with reference to indebted households only.

2. Figures in brackets show per cent to total indebtedness.



Table VII.10

Distribution of Sample Households According to Indebtedness  
by Source

Districts	(No.)							Total No. of Households Reporting Indebtedness
	Land- lord	Money Lender	Friends & Rela- tives	Coopera- tive So- cieties	Gramin Bank	Commer- cial Bank	Other Sources	
Allahabad	-	-	1 (16.7)	1 (16.7)	-	5 (83.3)	1 (16.7)	6 (100.00)
Azamgarh	-	-	1 (33.3)	1 (33.3)	1 (33.3)	-	-	3 (100.00)
Etah	-	-	-	1 (50.0)	1 (50.0)	-	-	2 (100.00)
Etawah	-	-	-	1 (11.1)	7 (78.8)	1 (11.1)	-	9 (100.00)
Fatehpur	1 (33.3)	-	-	-	1 (33.3)	1 (33.3)	-	3 (100.00)
Mainpuri	-	5 (53.6)	-	1 (11.1)	3 (33.3)	-	-	9 (100.00)
Pratapgarh	-	3 (18.8)	2 (12.5)	8 (50.0)	3 (18.8)	2 (12.5)	-	16 (100.00)
Rae Bareilly	-	-	-	9 (81.8)	1 (9.1)	1 (9.1)	-	11 (100.00)
Sultanpur	-	5 (62.5)	1 (12.5)	-	1 (12.5)	1 (12.5)	-	8 (100.00)
Total	1 (1.5)	13 (19.4)	5 (7.5)	22 (32.8)	18 (26.9)	11 (16.4)	1 (1.5)	67 (100.00)

Note : 1. Figures in brackets show per cent to total number of reporting indebtedness.

2. Some households have taken loans from more than one sources. Hence percentages do not add to 100.

Table VII.11

## Per Indebted Households Loans by Source

(In Rs.)

Districts	Land- lord	Money Lender	Friends & Rela- tives	Coopera- tive So- cieties	Gramin Bank	Commer- cial Bank	Other Sources	Total No. of Households Reporting Indebtedness
Allahabad	-	-	833 ( 3.9)	1500 ( 7.0)	-	16684 (77.5)	2500 (11.6)	21517 (100.00)
Azamgarh	-	-	533 (21.0)	1667 (65.8)	333 (13.2)	-	-	2533 (100.00)
Etah	-	-	-	1500 (30.8)	4500 (69.2)	-	-	6500 (100.00)
Etawah	-	-	-	556 (12.8)	3221 (74.4)	556 (12.8)	-	4333 (100.00)
Fatehpur	267 ( 1.2)	-	-	-	1500 ( 6.4)	21500 (92.4)	-	23267 (100.00)
Mainpuri	-	3167 (26.4)	-	122 ( 1.0)	933 ( 7.8)	7778 (64.8)	-	12000 (100.00)
Pratapgarh	-	706 (22.0)	94 ( 2.8)	750 (23.4)	741 (23.1)	920 (28.7)	-	3211 (100.00)
Rae Bareilly	-	-	-	2014 (16.7)	418 ( 3.5)	9627 (79.8)	-	12059 (100.00)
Sultanpur	-	769 (13.2)	63 ( 1.1)	-	125 ( 2.1)	4874 (83.6)	-	5831 (100.00)
Total	12 ( 0.1)	686 ( 7.7)	128 ( 1.4)	855 ( 9.6)	1252 (14.1)	5756 (64.6)	224 ( 2.5)	8913 (100.00)

Note : 1. Figures in brackets show percentage to total indebtedness.



## CHAPTER VIII

### Socio-Economic Characteristics by Land Holding Categories

#### VIII.1 Introduction

In the earlier chapter we have discussed the socio-economic characteristics of sample households with a focus on the average situation and inter-district variations therein. In the present chapter the focus is on the differences in socio-economic characteristics across different land size categories. For purposes of analysis the 100 sample households have been classified into four groups, namely, marginal (upto 2.49 acres), small (2.50 to 4.99 acres), medium (5.00 to 9.99 acres) and large (above 10 acres). Table IX.1 shows the distribution of sample households among the four categories and their respective shares in the total operated area. Marginal farmers comprise 28.9 per cent households, small 41.7 per cent, medium 21.1 per cent and large 8.3 per cent. The share of marginal farmers in total operated area is only 9.6 per cent, while that of the other three categories is about 30 per cent each. Thus, land distribution pattern is quite skewed with nearly 70 per cent of households belonging to the marginal and small categories accounting for only 40 per cent of operated area.



Table VIII.1Distribution of Sample Holdings by Size

Size Category	Households		Operated Area	
	Number	Per cent	Actual (Acres)	Per cent
1. Marginal	52	28.9	77.1	9.6
2. Small	75	41.7	249.3	30.9
3. Medium	38	21.1	242.0	30.0
4. Large	15	8.3	237.3	29.5
All Categories	180	100.0	805.7	100.0

VIII.2 Social and Demographic Characteristics

The average family size is positively related to the land size category. It rises from 5.6 persons for marginal farmer households to 9.9 persons for large farmer households (Table VIII.2). The caste composition of households was also found to be distinctly related to size of holding. Thus 50 per cent of marginal farmers and 40 per cent of small farmers belonged to the scheduled castes, while their proportion in medium and large holdings was nominal (Table VIII.3). The average size of land holding for sample households was found to be 6.5 acres for higher caste households, 3.5 acres for backward caste households and 2.6 acres for scheduled caste households.

Table VIII.2

Average Family Size by Land Holding Categories

Size Category	Average Family Size (No.)
1. Marginal	5.6
2. Small	6.4
3. Medium	7.5
4. Large	9.9
All Categories	6.7

Table VIII.3

Distribution of Scheduled Caste Households by Land Holding Categories

Size Category	Number of S.C. Households	Per cent of S.C. Households to Total Households in the Category
1. Marginal	25	50.0
2. Small	20	40.0
3. Medium	4	8.0
4. Large	1	2.0
All Categories	50	27.8

The distinct caste hierarchy in economic conditions was also paralleled by the caste hierarchy in social indicators like education. Thus, the literacy rates were found to be 45.2 per cent for scheduled castes, 43.7 per cent for backward castes and 70.6 per cent for higher castes. The literacy level of household members also rises steadily with the increase in the size of holding from 45.9 per cent in case of marginal farmers to 72.3 per cent in case of large farmers.

Table VIII.4

Literacy Levels of Household Members by Land Holding Categories

Size Category	Per cent of Literate Household Members
1. Marginal	45.9
2. Small	53.6
3. Medium	62.9
4. Large	72.3
All Categories	56.2

VIII.3 Land Use and Quality

Table VIII.5 shows per household operated area and net sown area. About 71 per cent of the operated area is currently under cultivation. In case of marginal farmers the



proportion of net sown area to total holding area is relatively more as compared to the other three categories. Thus nearly one-third of the land area under private ownership is not being put to productive use due to poor quality of soil or lack of irrigation facilities.

Table VIII.5

Net Sown Area and Operated Area Per Household  
by Land size Categories

Size Category	Net Sown Area (in Acres)	Operated Area (in Acres)	Net Sown Area As Per cent of Operated Area
1. Marginal	1.16	1.48	78.4
2. Small	2.32	3.32	69.9
3. Medium	4.44	6.37	69.7
4. Large	11.40	15.62	72.9
All Categories	3.19	4.48	71.2

Over one-fifth of the holding area of all households falls under the category of wasteland, that is land which is not being put to productive use due to its poor quality. The proportion of wasteland to total holding area is relatively large on small and medium holdings and lowest on large holdings (Table VIII.6). Bulk of the wasteland falls under the category of cultivable wasteland.

Table VIII.6

Per cent of Wasteland Owned by Land Holding Categories

Size Category	Wasteland Owned Per Household (in Acres)	Wasteland As Per cent of Total Holding
1. Marginal	0.29	17.6
2. Small	0.93	28.0
3. Medium	1.59	25.0
4. Large	1.64	10.4
All Categories	0.94	21.0

Even the land under cultivation is suffering from varying degrees of degradation due to salinity/alkalinity, soil erosion, etc. As shown by Table VIII.7 about 60 per cent of area under cultivation is of degraded quality on marginal holdings, while this proportion is about 40 per cent in case of small and medium holdings and 24 per cent in case of large holdings.

Table VIII.7

Proportion of Degraded Land by Land Holding Categories

Size Category	Area of Degraded Land Per Household (in Acres)	Degraded Land As Per cent of Net Sown Area
1. Marginal	0.71	61.2
2. Small	0.89	38.6
3. Medium	1.74	39.2
4. Large	2.74	24.0
All Categories	1.17	36.8

#### VIII.4 Irrigation Extent and Source

Over 90 per cent of net sown area on all size categories receives atleast one irrigation in a year. However, as a proportion of operated area irrigated area is only around 66 per cent, though the situation is slightly better on the marginal holdings in this respect (Table VIII.6).

Table VIII.6

Net Irrigated Area on Sample Farms by Land Size Categories

Size Category (in Acres)	Per cent of Net Sown Area Irri- gated	Per cent of Operated Area Irrigated
1. Marginal	93.9	73.5
2. Small	90.6	63.1
3. Medium	92.5	65.2
4. Large	94.6	66.4
All Categories	93.0	66.2

Looking at the sources of irrigation we find that all categories of farmers except the large farmers are primarily depending on hired sources of irrigation, which include government canals as well as private pumpsets and tubewells owned largely by the bigger cultivators. Dependence on hired sources of irrigation declines sharply with the rise in the size of holdings (Table VIII.9).



Table VIII.9

Per cent of Irrigated Area by Own Sources by Land  
Size Categories

Size Category	Per cent of Irrigated Area by Own Sources
1. Marginal	7.9
2. Small	24.0
3. Medium	35.4
4. Large	78.7
All Categories	42.2

#### VIII.5 Agricultural Productivity, Inputs and Marketing

We do not find evidence of any strong economies of scale on the sample farms. As can be seen from Table VIII.10 gross productivity on marginal and small farms exceeds Rs.3000 per acre, which is not much lower than the productivity levels on larger farms. Differences in costs per acre are even smaller across different size groups. In net productivity per acre the performance of medium farmers is distinctly better followed by the large farmers. The resource use efficiency as revealed by the output-input ratio is distinctly better on medium category farms.

Table VIII.10

Gross and Net Productivity and Cost Per Acre of N3A  
on Sample Farms by Size Categories

(Rs.)

Size Category	Gross Productivity Per Acre	Cost Per Acre	Net Productivity Per Acre
1. Marginal	3020	1349	1671
2. Small	3150	1499	1657
3. Medium	3920	1389	2532
4. Large	3357	1364	2005
All Categories	3425	1411	2019

It is also important to draw attention to the sharp inter-district differences in agricultural productivity and cost levels even on the same size of farms revealed by Table VIII.11, VIII.12 and Table VIII.13. Thus gross productivity per acre on marginal farms varies from a low of Rs.1569 to a high of Rs.6838 and net productivity on this category varies between Rs.592 and Rs.5426, while input cost varies from 385 per acre to Rs.1960 per acre. Similar differences across districts in agricultural productivity and costs are also to be observed on other land holding sizes.

No clear pattern of productivity or cost differences between different land size categories across districts is visible. Thus highest net productivity was observed on marginal farms in 3 districts and on small, medium and large farms in two districts each (Table VIII.13).

Table VIII.11

Gross Value of Agricultural Produce Per Acre  
of Net Sown Area by Size

(in Rs.)

Districts	Marginal	Small	Medium	Large	All Categories
Allahabad	2366	2135	4118	2688	2925
Azamgarh	3242	2988	2712	-	3001
Etah	6338	5372	6091	3497	5544
Etawah	3818	3035	3015	-	3234
Fatehpur	1569	3268	2335	3312	2908
Mainpuri	4211	5505	4474	4438	4772
Pratapgarh	2278	2311	2489	2551	2427
Rae Bareli	1882	3409	3341	3642	3453
Sultanpur	1667	1936	1985	2078	1918
All Districts	3020	3100	3721	3357	3425



Table VIII.12

Total Cost Per Acre of Net Sown Area by Size Categories

Districts					
	Marginal	Small	Medium	Large	All Categories
Allahabad	1960	1408	1478	1735	1579
Azamgarh	1389	1369	1018	-	1286
Etah	1412	2252	1933	706	1753
Etawah	1691	1742	1322	-	1555
Fatehpur	385	1351	924	1443	1200
Mainpuri	1454	1608	1429	1342	1466
Pratapgarh	1686	1778	1116	1109	1589
Rae Bareilly	1180	1727	1247	1422	1433
Sultanpur	613	881	835	1094	861
All Districts	1349	1499	1389	1364	1411

Table VIII.13

Gross Value of Agricultural Produce Per Acre  
of Net Sown Area by Size

(in Rs.)

Districts	Marginal	Small	Medium	Large	All Categories
Allahabad	426	727	2640	930	1346
Azamgarh	1853	1649	1674	-	1715
Etah	5426	3120	4158	2791	2789
Etawah	2127	1295	1693	-	1679
Fatehpur	1184	1917	1411	1869	1708
Mainpuri	2757	3897	3045	3096	3306
Pratapgarh	552	533	1373	1442	1038
Rae Bareilly	702	1682	2094	2220	2020
Sultanpur	1054	1055	1150	984	1058
All Districts	1671	1657	2532	2005	2019

Table VIII.14 and VIII.15 show district-wise and size category-wise average yield of paddy and wheat respectively. For the entire sample one does not find noticeable variations in average yields of the two major crops on different land size categories. The average yield hovers around 800 Kg. per acre (1776 kg. per hectare) in case of paddy and 700 kg. per acre (1729 kg. per hectare) in case of wheat. Again one finds significant inter-category and inter-district variations in the average yields.

Use of fertilisers per acre of gross sown area is fairly high on all size categories - around 100 kg. Marginal farmers are lagging only a little behind the other three categories in the use of fertilisers but there are significant variations in same size category in fertiliser use across districts (Table VIII.16).

Agriculture in the project area is primarily subsistence oriented and the extent of monetization is low. The proportion of value of output sold to total value of output is as low as 13.6 per cent on marginal farms. The proportion rises with the size of holding being 27.7 per cent on small farms, 44.2 per cent on medium farms and 59.4 per cent on large farms (Table VIII.17).



Table VIII.14

Average Yield of Paddy by Size Categories

(in Kg./Acre)

Districts	Marginal	Small	Medium	Large	All Categories
Allahabad	768	691	821	707	741
Azamgarh	1110	766	594	-	829
Etah	1018	1229	1087	700	1050
Etawah	1077	750	1044	-	1028
Fatehpur	412	688	527	637	602
Mainpuri	1070	1623	864	1230	1178
Pratapgarh	670	618	368	600	605
Rae Bareilly	517	621	816	1056	987
Sultanpur	465	431	500	667	457
All Districts	803	800	780	862	819

Table VIII.15  
Average Yield of Wheat by Size Categories

(in Kg./Acre)

Districts	Marginal	Small	Medium	Large	All Categories
Allahabad	467	511	586	600	555
Azamgarh	954	834	871	—	835
Etah	967	800	511	1500	787
Etawah	875	800	920	—	865
Fatehpur	343	391	385	521	429
Mainpuri	1100	1360	846	1286	1095
Pratapgarh	396	545	418	470	471
Rae Bareilly	337	1100	669	567	661
Sultanpur	804	441	600	400	512
All Districts	707	735	701	599	684

Table VIII.16

Fertilizer Use Per Acre by Size Categories

(in Kg.)

Districts	Marginal	Small	Medium	Large	All Categories
Allahabad	68	61	145	96	96
Azamgarh	74	143	100	-	109
Etah	141	89	83	65	85
Etawah	106	104	57	-	84
Fatehpur	30	59	31	39	42
Mainpuri	176	104	122	308	160
Pratapgarh	119	107	124	64	101
Rae Bareli	49	93	121	90	93
Sultanpur	50	116	93	167	110
All Districts	83	98	99	96	96



Table VIII.17

Per cent Value of Output Sold to Total Value  
of Agricultural Output by Size Categories

Size Category	Per cent of Output Sold to Total Output
1. Marginal	13.6
2. Small	27.7
3. Medium	44.2
4. Large	59.4
All Categories	41.2

#### VIII.6 Livestock Ownership

Animal husbandry is an integral part of the agriculture of the rural economy and every household keeps a few draft and milch animals. Table VIII.18 shows the number of livestock of different types kept by the sample households. Even a marginal farmer keeps on an average 2.69 livestock consisting of 1.40 draft animals, 1.08 milch animals and 0.21 goats. The number of livestock per household increases with the increase in the size of holding.

Table VIII.18

Number of Livestock Owned Per Household by  
Size Categories

Size of Holding (in Acres)	Draft Animals	Milch Animals	Sheep	Goats	Total Livestock
Upto 2.49	1.40	1.08	-	0.21	2.69
2.50 to 4.99	1.57	1.36	1.00	0.47	3.62
5.00 to 9.99	1.66	1.39	0.53	0.47	4.05
10.0 & Above	1.67	3.87	0.13	0.33	6.00
All Categories	1.55	1.45	0.54	0.38	4.37

VIII.7 Household and Per Capita Income

Table VIII.19 shows average household income by source for different size categories. Annual income of a marginal farmer is only Rs.7452 as compared to an income of Rs.41686 of a large farmer. Agriculture contributes only 26 per cent of household income in case of marginal farmers. Animal husbandry also contributes a significant part of total income, on all categories of farms, though its relative importance is greater in case of marginal and small farms. The small land base forces the marginal and small farmers to supplement their income from other sources mainly wage labour. In fact 47.3 per cent of household income in case

of marginal farmers and 33.7 per cent in case of small farmers is derived from sources other than agriculture and animal husbandry. For medium and large farmers this proportion is only about 20 per cent.

Table VIII.19

Average Household Income by Source and Size Category

(in Rs.)

Size Category	Per Household Annual Income From			
	Agricu- ture	Animal Husbandry	Other Sources	All Sources
1. Marginal	1940 (26.0)	2457 (32.7)	3075 (47.3)	7472 (100.0)
2. Small	3840 (34.1)	3626 (32.2)	3809 (33.7)	11275 (100.0)
3. Medium	11235 (39.4)	3958 (20.8)	3751 (19.8)	18944 (100.0)
4. Large	22714 (54.5)	10721 (25.7)	8251 (19.8)	41686 (100.0)
All Categories	6418 (44.8)	3927 (27.5)	3963 (27.7)	14308 (100.0)

Note : Figures in brackets show per cent to total household income.



Table VIII.20

Distribution of Household According to Level  
of Per Capita Income

Level of Per Capita Income (in Rs.)					
	Marginal	Small	Medium	Large	All Cate- gories
					(Nos.)
Less than 1000	20 (38.5)	16 (21.3)	3 (7.9)	1 (6.7)	40 (22.2)
1000 - 1500	20 (38.5)	32 (42.7)	8 (21.1)	2 (13.3)	62 (34.4)
1500 - 2500	5 (9.6)	14 (18.7)	18 (47.4)	2 (13.3)	39 (21.7)
2500 +	7 (13.5)	13 (17.3)	9 (23.7)	10 (66.7)	39 (21.7)
Total	52 (100.0)	75 (100.0)	38 (100.0)	15 (100.0)	180 (100.0)
Per Capita Income (Rs.)	1326	1751	2539	4224	2137

Note : Figures in parentheses show per cent to total household in the category.

Per capita income comes to Rs.1326 on marginal farms, Rs.1751 on small farms, Rs.2539 on medium farms and Rs.4224 on large farms. Table VIII.20 shows the distribution of households in different size categories by the level of per capita income. If we take an annual per capita income of Rs.1500 as the poverty line at current prices then the incidence of poverty in case of marginal farmers comes to 76.9 per cent and for small farmers to 83.3 per cent. About 29 per cent of medium farmer households and 20 per cent of

large farmer households are also living below the poverty line.

The caste-wise analysis of income levels reveals a distinct hierarchical relationship between caste and income levels. The average households income of higher castes was Rs.19,647, which was well above the average of Rs.14,197 for all households. The corresponding figure for the backward and scheduled castes was Rs.13,104 and Rs.9,411 respectively.

The study found that the per capita income of the higher caste households was Rs.2,646 as compared to the per capita income of Rs.1,944 for backward caste households and Rs.1,618 for scheduled caste households.

Taking Rs.1,500 per capita annual income as the poverty line at current prices, the study found that 45 per cent of backward caste households and 64 per cent of scheduled caste households were living in poverty as compared to 30 per cent of the higher caste households in this category. The proportion of scheduled caste households in middle income groups, those earning between Rs.1,500 and Rs.2,500 per capita, was 20 per cent as compared to the figure of about 32 per cent of backward caste as well as higher caste households. The proportion of comparatively better off households, those with a per capita income of Rs.2,500 and above, was also significantly larger among upper castes (38 per cent) as compared to backward castes (23 per cent) and scheduled castes (16 per cent).

VIII.8 Indebtedness

Table VIII.21 shows category-wise extent and sources of indebtedness. The table clearly reveals that access to credit facilities particularly from commercial banks is relatively better in case of larger farmers. The proportion of households getting loans and the average amount of loan

Table VIII.21

Households Taking Loans and Loans Per Indebted Household by Source and Size Categories

Size Category	Households Taking Loans From					
	Commercial Banks		Cooperative Societies		All Sources	
	No.	Amount Per Household (Rs.)	No.	Amount Per household (Rs.)	No.	Amount Per household (Rs.)
1. Marginal	1 (1.9)	3000	4 (7.7)	1843	16 (30.8)	3478
2. Small	4 (5.3)	3500	8 (10.7)	2529	24 (38.0)	3041
3. Medium	4 (10.5)	16375	7 (18.4)	1770	16 (42.1)	8906
4. Large	4 (26.7)	46750	2 (13.3)	2038	7 (40.7)	28413
All Categories	13 (7.2)	21346	21 (11.7)	2098	63 (35.0)	7480

- Note : 1. Figures in brackets show per cent to total households in the category.
2. Amount of loan is per indebted family only.



per indebted household increases with the size of land holding. The share of large farmers in total loans is as high as 42.3 per cent, followed by medium farmers who have a share of 30.3 per cent. The corresponding figures for marginal and small farmers are only 11.8 per cent and 15.5 per cent. From the size of loan per household or per acre it appears that the cultivators have mainly gone in for short period crop loans. Taking total net sown area under different farm size categories into account loan per acre comes to Rs.922, Rs.420, Rs.845 and Rs.1164 in case of marginal, small, medium and large holdings respectively.

We had also asked our respondents whether they would be willing to take loans for purposes of wasteland development and whether they would insist on subsidy for the purpose. Over 70 per cent of respondents of all categories expressed their willingness to take loan for wasteland development, though a large majority wanted subsidy for the purpose as well (Table VIII.22).

Table VIII.22

Per cent of Farmers Showing Willingness to Take Loan or Subsidy for Wasteland Development by Size of Categories

Size of Category	Willing to Take Loan	Willing to Take Subsidy
1. Marginal	71.1	65.4
2. Small	72.0	73.3
3. Medium	73.7	74.1
4. Large	80.0	86.6
All Categories	72.8	74.7

### VIII.9 Concluding Remarks

To sum up, our survey has revealed a highly skewed land distribution and preponderance of marginal and small farmers, the majority of whom belongs to socially and economically depressed scheduled castes. Around half of the marginal and small farming household members were found to be illiterate. About one-fifth of the land area owned by farmers is lying waste, while a considerable part of cultivated area is degraded due to problems of sodicity. Though irrigation facilities are fairly developed the marginal and small farmers have to depend largely on hired sources of irrigation.

Net value productivity is around Rs.5000 per hectare for the entire sample. Per hectare yield of rice is around 1300 kg., while that of wheat is around 1700kg. In terms of agricultural productivity and fertiliser use the performance of the marginal and small farmers is fairly close to that of the larger farmers. There were, however, very sharp inter-district differentials in agricultural productivity even on the same size of farms. Agriculture in the project area was found to be subsistence oriented with very low proportion of marketed surplus particularly on small and marginal farms.

Due to small productive base agriculture contributed only about one-fourth of household income on marginal farms and about one-third on small farms. Animal husbandry is an important secondary activity for all categories of farms and